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TRANSILLUMINATION OF THE INFANT HEAD DEMONSTRATED BY A CASE OF HYDRANENCEPHALY

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Transillumination of the infant head is a sign which deserves greater prominence. It is simple to elicit and requires only a darkened room and a source of illumination, with the head held in the beam of light. A pocket torch has been used with success, but the stronger the light used the more striking is a positive result.

Normally, and where the cerebral cortex is more than 1 cm. thick,[1] the test is negative and the head does not transilluminate. When hydranencephaly is present or when the cerebral cortex is very thin, a light placed behind the head in a darkened room will light up the entire head with an orange-red light, giving an appearance rather like a Chinese lantern. The vessels of the scalp and the basal structures of the brain stand out in dark contrast to the reddish glow of light through the head.

Soon after this sign was first brought to my attention[2] I found it most useful. Two Bantu mothers whose very young babies had large heads were seen on the same afternoon. As the nearest neurosurgical unit was 20 miles away, the journey costly and beds at a premium, it was decided to transilluminate the patients' heads as a simple screening procedure to determine whether operative interference was likely to be helpful.

The transillumination test was negative in the one infant with hydrocephalus, and this mother undertook the journey to the hospital, where it was decided that the baby was an early and suitable case for operation.

The second baby showed a strikingly positive test (Fig. 2) and was spared the journey to hospital. She is presented below as a case of hydranencephaly, believed to be the first reported in the South African Bantu. The prognosis is hopeless.

CASE REPORT

In October 1957 a female child of 4 months was brought to the clinic because her mother had noticed at the age of 2 months that the head was big. She stated that pregnancy and delivery were normal and the baby, who was the 5th child, cried at birth, and during the next few weeks appeared quite as normal in every way as the mother's preceding 4 infants. However, at 2 months of age it was noticed that the baby's head was unusually large. She had always sucked well at the breast and slept well at night, but during the day she was restless and cried a great deal. She had thrived and gained weight steadily (infant welfare clinic records were available to confirm this), but had not yet smiled, nor did she follow a light with her eyes or hold up her head.

The patient was a plump infant with a large head (Fig. 1), measuring 19¾ inches in circumference. There was no craniotabes; the anterior fontanelle was large, but the cranial sutures were not unduly separated; no tympanitic percussion note was obtained. Transillumination of head showed diffusion of light in all directions (Fig. 2). The pupils were equal and responded to light, but the child did not appear to appreciate light and the eyes did not follow a light or other moving objects. There was bilateral optic atrophy. The Moro reflex was still present in response to loud noises, or pulling the blanket from beneath the child. Reflexes were all present; plantars were extensor. Apart from the size of the baby, she resembled a vigorous newborn infant. An electro-encephalograph (Fig. 3) showed little or no evidence of electrical activity on the left side, and on the right high-voltage delta activity was recorded. This tracing supported the diagnosis of hydranencephaly.

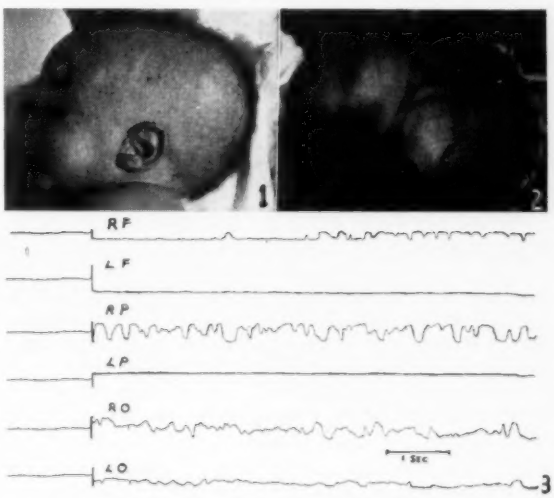

Fig. 1. Appearance of the patient's head at 4 months of age.
Fig. 2. The appearance of the patient's head when transilluminated. The source of light is behind the head. *Fig.* 3. Electro-encephalograph showing flat tracing on left side.

Five months later the child had shown no neurological improve-

ment, irritability had increased, and the head had enlarged to a circumference of 22½ inches.

DISCUSSION

Hydranencephaly is a remarkable cerebral defect, probably due to the conversion of the cerebral hemispheres into single thin-walled, sac-like chambers due to a destruction of most, or all, of the cerebral cortex and white matter.[3] The basal ganglia, thalamus, and mid-brain are often to some extent preserved, and symptoms may be so inconspicuous in the early weeks of life as to give the impression of a relatively normal infant. After several months, failure of mental development, paralysis and epileptic manifestations become prominent symptoms.[4] In babies who live beyond the 3rd month an important feature is an abnormal increase in the size of the head, although this may occur earlier. The view is held that hydranencephaly constitutes a pathological process which is similar in kind to multiple cystic encephalomalacia[3] but more severe in degree. Yakovlev and Wadsworth, however, consider the defect to be a true cerebral agenesia.[5]

The condition was first described by Cruveilhier in 1835.[6] In 1950 Hamby *et al.*[7] reported the diagnosis of 7 cases during life seen in a period of 2 years, and made a plea for the frequent use of the transillumination test. One of their cases in whom this test was not used early had been passed for adoption at the age of 1 week by a competent paediatrician, but at 2 weeks of age the baby became irritable and the head was noticeably enlarged by 6 weeks. The foster-mother noticed on one occasion that the head was transilluminated by the light from a near-by floor lamp. These authors have tried the transillumination test on several children with communicating hydrocephalus but have found the residual brain tissue sufficiently opaque to prevent transillumination, except in one case where the cerebral layer was only 0·3 cm. thick.

In reviewing their 7 cases of hydranencephaly, Hamby *et al.* found the following clinical pattern: Normal behaviour during the first few weeks of life, but then obvious developmental retardation; enlargement of the head, first noticeable at a time varying from 2 weeks to 3 months; hyper-irritability becoming apparent with the head enlargement and associated with the Moro and grasp reflexes; abnormal ocular function; convulsive activity; tympanitic note on skull percussion; a diffusely flattened electro-encephalograph tracing and transillumination of the head. The last sign the authors believe to be the single, simplest and most valuable aid in diagnosis. Its value is lost if the fluid within the meninges is made opaque by blood, as after operation or needling, or by intracranial infection.

The prognosis for patients with hydranencephaly is poor, most cases dying before the age of 1 year, although Edinger and Fischer described one child who lived for 3½ years.[8]

As a screening procedure, preliminary to further expensive investigations or as part of the routine examination of small babies for adoption, the transillumination sign deserves greater prominence. It may be especially helpful in areas where radiological and other facilities are not available, as it proved to be in the case reported above.

SUMMARY

The infant head will transilluminate when hydranencephaly is present or if the cerebral cortex is very thin. Transillumination of the infant head deserves greater prominence as a screening procedure preliminary to further expensive investigations, or as part of the routine examination of small babies for adoption.

The sign, which is easy to elicit, is described, discussed, and illustrated photographically. A patient is described and hydranencephaly is briefly discussed. This is apparently the first case of this condition described in the South African Bantu.

I wish to thank Dr. S. P. Jacobson, Superintendent, Alexandra Health Centre and University Clinic, for permission to publish, and Drs. L. Granat and F. Schneier for referring the cases to me and for their assistance and interest. I am very grateful to Drs. Allen, Kerr and Mendelow for the opportunity to obtain an electroencephalogram on this patient, and for their opinion on the tracing.

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EDITORIAL

THE LONG-TERM PROGNOSIS OF CARDIAC INFARCTION

'The life of him who has had an unmistakable attack of angina is not insurably safe for an hour. And yet existence *may* be protracted for years. Is there any method whereby we can with a reasonable amount of security place a given sufferer among those who shall be cut off the next instant, or among those who shall survive for years? I know of none.'

Walter Hayle Walshe, 1862.[1]

Until recently, practitioners had little to offer patients who had recovered from an attack of acute cardiac infarction. In some cases, the patients were correctly advised to adjust their way of living along physically and emotionally less strenuous lines. Others, again, were pertinently warned against the danger of adding obesity to the burden of their damaged hearts. Nothing was done to inhibit the extension of the underlying coronary atherosclerosis and occlusion, or to prevent fresh infarction. The last few years, however, have witnessed the institution of research into practical measures aimed at these fundamental aspects of the disease. Two of the most widely canvassed of these measures, viz., long-term anticoagulant therapy,[2] and the dietary reduction of the serum-cholesterol level,[3] have recently been discussed in these columns. The possible role of surgical procedures to increase the coronary blood flow is also being investigated.[4] In the near future, a spate of publications extolling or denying the virtues of these and other procedures may be expected, and their proper evaluation will require a full appreciation of the natural history of cardiac infarction. Accordingly, we feel that a brief review of the latter will be of interest to practitioners when they come to consider the claims made by the rival advocates of the above regimes.

About a quarter of all the victims of cardiac infarction die in the acute attack or soon after; approximately another quarter of all episodes of cardiac infarction are clinically 'silent' and the diagnosis is only made as a chance finding at necropsy. The present discussion is concerned only with the remaining 50%, i.e. with those who survive clinically recognized episodes of acute infarction by a month or more. A number of large-scale prognostic studies of such patients have been reported and we have selected 4 of them for discussion.

The first 2 of these studies deal with hospital experience. At Oxford, Honey and Truelove[5] have studied 348 men and women surviving at least 2 months after their acute attack; the majority of these subjects were more than 60 years old. This study is particularly noteworthy because only 1 case of this large series was lost to follow-up. After 5 years 61% were still alive, and after 10 years the survival rate was 32%. The cause of death in nearly half the cases was recurrent cardiac infarction. From Chicago, Cole *et al.*[6] reported their experience with a somewhat younger group of patients (mean age 56·7 years). Of an initial series of 356 2-month survivors of acute cardiac infarction, 71 were lost to follow-up; of the remaining 285, 67% were alive after 5 years and 44% after 10 years, while 10% were still alive 15 years after the initial attack. Again, more than half of the deaths were due to recurrent infarction.

From Boston, Richards *et al.*[7] have reported the results of a 25-year follow-up study of 162 patients who were alive 1 month after their acute cardiac infarction. This series is of special interest in that all the patients were originally seen in the private practice of one physician (Dr. Paul White) at least 25 years ago. Of these patients 49% were alive after 5 years, 31% after 10 years and 23% after 15 years, while 6 patients (4%) were still alive after 25 years. In 1920-1930, when these cases were originally seen, the diagnosis of cardiac infarction was usually made in elderly patients with the 'classical' severe clinical picture. This may account for the relatively poor prognosis when compared with more modern series in which increased experience, more extensive electrocardiography, and perhaps a change in the pattern of the disease, have resulted in the diagnosis being made in younger subjects and in milder and more atypical forms of the disease. In the Boston series, as in those from Oxford and Chicago, half of the deaths were due to a recurrence of the disease.

Finally, the report of Morris *et al.*[8] may be of personal interest to our readers. It deals with medical practitioners registered with a London medical insurance society, 162 of whom had survived a first attack of 'coronary thrombosis' by at least 1 month. In this series, the survival rate after 5 years was 76% and after 10 years it was 55%. These doctors were all 40-64 years old, i.e. somewhat younger than in the previous series, and this probably accounts for their better prognosis.

It is generally agreed that cardiac failure, cardiomegaly, arrhythmia, and a previous history of cardiac infarction, all indicate a relatively bad prognosis.[5-7] Hypertension and diabetes mellitus are also generally regarded as bad prognostic factors, but this was not confirmed in the Oxford survey.[5] In young patients, the prognosis is better than in older ones.[5,6] Angina pectoris, developing after an episode of cardiac infarction, worsens the prognosis.[5,6] On the other hand, long-standing angina pectoris *before* an attack of cardiac infarction does not worsen the prognosis and, according to the Chicago survey,[6] it actually improved it; this may be due to the better coronary collateral circulation which develops in patients with long-standing angina pectoris.[9] The prognosis is particularly good in those cases who survive their cardiac infarction without any residual cardiac failure, angina pectoris, arrhythmia or cardiac enlargement. In the Boston survey,[7] the 5-year survival rate for this group was 82%.

Summing up the findings in the above surveys, it may be stated that, of patients who survive an episode of cardiac infarction, approximately two-thirds are alive after 5 years and about one-third to one-half are alive after 10 years. When considered in relation to the average life-expectancy

of the general population at the same age, it will be realized that the usual gloomy prognosis in survivors of cardiac infarction is unfounded.

Nevertheless, there can be no justification for complacency; in the above surveys, at least half of the deaths were due to recurrence of cardiac infarction and many of the other deaths were due to cardiac failure or to some other cardiovascular cause. It is important, therefore, that any measure which may inhibit the development of atherosclerosis and coronary occlusion should be given the most careful consideration and, if possible, should be submitted for clinical trial. It will be clear from the above account of the natural history of cardiac infarction that clinical trials will be fraught with difficulty. Trials will have to be of several years' duration and, to allow for the considerable individual variation in prognosis, the clinical material will have to be very large. Without these criteria it will not be possible adequately to assess the efficacy of any therapeutic regime.

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VAN DIE REDAKSIE

NAVORSING OOR EPILEPSIE

Epilepsie is een van die siektetoestande wat die langste bekend en die vroegste beskryf is. Omdat dit so nou verbonde is aan corticale funksie en aan persoonlikheidsreaksies, is dit ook een van die interessantste siektes wat bestaan. En tog bly die antwoord op die oorsake van baie epileptiese toestande nog uit.

Daar is op hierdie gebied oor die wêreld al 'n groot hoeveelheid navorsing gedoen. Ons dink byvoorbeeld aan die werk van mense soos Penfield, Lennox en baie andere. Hulle werk en navorsing het in groot mate bygedra tot 'n beter kennis van baie van die basiese en newe-probleme van die epileptiese gesteldheid.

Omdat so baie van die vrae na die aard en veroorsaking van die epileptiese versteurings, en dus ook van breinfunksie, onbeantwoord bly, is dit belangrik dat navorsing, soos waarna ons hierbo verwys het, moet voortgaan. Hierdie oorweging geld ook, en veral, vir ons in Suid-Afrika aangesien hier eintlik geen navorsingsinrigting vir die epileptiese toestande bestaan nie.

Epileptiese pasiënte kan wel psigiatriese en neurologiese ondersoek ontvang—deur private geneeshere of in algemene hospitale en in hospitale vir geestesversteurdes—maar, van sistematiese navorsingsprojekte oor die hele gebied van die epileptiese gesteldheid met sy wye vertakkinge, is daar geen sprake nie.

Afgesien van die inrigtings vir geestesversteurdes waar epileptiese pasiënte om hul psigotiese toestand aangehou word, het ons 'n paar inrigtings in Suid-Afrika waar normale, dit wil sê nie-psigotiese pasiënte, versorg word. Daar is byvoorbeeld die Randse Werkverskaffersvereniging vir Epileptici in Johannesburg waar 'n betreklike klein aantal volwasse epileptiese persone, sommige met hul gesinne, versorg word. Dan is daar die Jan Kriel-Skool vir Epileptici te Kuilsrivier waar ongeveer 120 opvoedbare epileptiese kinders versorg en opgelei word. Hulle kan daar skoolopleiding ontvang tot standard 10. Ook kry hulle simptomatiese behandeling vir hul epilepsie. En onlangs is 'n begin gemaak met 'n tweede skool vir epileptiese kinders in Kimberley—die Alexanderfontein-skool. Hierdie skole en inrigtings is egter slegs toeganglik vir blanke epileptiese persone en daar is geen spesiale navorsingsafdelings aan enigeen van hulle verbonde nie.

In Suid-Afrika met sy bevolking van nagenoeg 15 miljoen persone van alle rasse, lê daar dus 'n groot onontgonne gebied van navorsing. Aangesien navorsingswerk op mediese gebied in hierdie land, op ander gebiede, goed vergelyk met wat in die res van die wêreld gedoen word, moet ons ook ernstig daaraan dink om die leemte wat betref epileptiese navorsing aan te vul.

Ons wil dit dus in die vooruitsig stel dat die nuwe mediese skool van die Universiteit van Stellenbosch, tesame met die departemente van sielkunde en sosiologie (wat almal vlak naas die Jan Kriel-Skool vir Epileptici lê), in hul ontwikkelingsprogram hierdie gebied van navorsing in gedagte sal hou. En dieselfde oorweging geld ten opsigte van die Witwatersrandse mediese skool en die genoemde ander universiteitsdepartemente, wat naby die Randse inrigting en betreklik naby die skool op Kimberley is.

CANCER OF THE LIP

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The incidence of carcinoma of the lip in South Africa is very high. In the years 1949-56 over 500 cases have been referred to the Radiotherapy Department of Groote Schuur Hospital and, of these, 470 cases are analysed. By far the largest number of cases occur in elderly European males and the lower lip is about 10 times as commonly involved as the upper. Usually one spot only breaks down but we have on several occasions seen multiple, simultaneous and separate carcinomas of the lip quite apart from local recurrences of the disease. The record is held by a patient in whom 6 separate carcinomas of the lip have been observed, which ultimately required surgical removal of both lips.

AETIOLOGY

A large proportion of patients have been outdoor workers, and it is our impression that it is the excessive weathering by

the sun and wind associated with the outdoor life that has been responsible for most of the epitheliomas in this situation. Syphilis has not been present in unusual numbers of our cases.

The typical case starts as a small hard nodule which develops slowly on the lower lip, usually to one side of the mid-line. The nodule occurs on the exposed surface near its cutaneous border, is quite painless, and is often unremarked by the patient. Such small epitheliomas are not infrequently found in those patients who come up for treatment for solar keratosis of the face, and who have already got actively growing rodent ulcers.[1] The age incidence of the condition is indicated in Table 1. Because the majority of our patients are of the same race, colouration and diathesis as the typical case of rodent ulcer,[1] namely Afrikaner farmers with fair hair, blue eyes and a soft pale skin, we feel that carcinoma of the lip probably has the same aetiological factors operating on it as the former disease (Fig. 1).

TABLE I. AGE GROUPS OF 366 CONSECUTIVE CASES OF CANCER OF THE LIP

	Under 30	30-39	40-49	50-59	60-69	70-79	80+
Number ..	4	54	65	85	88	47	23
Percentage ..	1	14·7	17·6	23·2	24	13	6·3

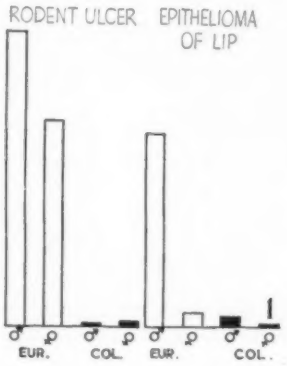

Fig. 1. Series of cases of rodent ulcer and epithelioma of the lip illustrating sex and race distribution.

The relative rarity of the disease in women is noteworthy, as is its rarity in the upper lips, this latter being almost certainly because the upper lip is in the shade, whereas the lower lip gets sunburnt. Of the 305 cases analysed only 2 cases in the upper lips of Coloured women have been observed (Table II).

TABLE II. EPITHELIOMA OF LIP: 305 CONSECUTIVE CASES: RACE AND SEX

	European		*Coloured*	
	Male	*Female*	*Male*	*Female*
Lower ..	249	18	14	3
Upper	8	7	4	2

COURSE

At its first appearance the nodule may be observed either as a small non-ulcerated indurated area which is quite painless, or as a small warty projection, or further as an ulcer which fails to heal, or finally as an area of leukoplakia.

The nodule grows and encrustations appear on its surface, these are repeatedly removed by the patient and later a small ulcer develops. The ulcer is typically carcinomatous in character with everted edges. It secretes a thin, sero-sanguinous discharge which clots and is responsible for the encrustations. It is at this stage, when the ulcer is about 1 cm. across, that the patient often first seeks advice. It is unfortunate that the first type of advice often sought is that of the 'cancer curer', who is recommended by many people in this country, where nodules on the face and lips are common and where many have had experience of these among their immediate acquaintances. The 'cancer curer' treats his clients with escharotics of various kinds, and after the application of these remedies a fulminating reaction occurs and a necrotic sloughing mass is taken out of the wound. This is demonstrated as a cancer with its 'roots'. *Once a case has had such treatment we have observed that radiotherapy or surgery will rarely succeed in finally curing the condition*, and many of our disappointments give a story of such treatment. It appears that the caustic chemicals used, while they can seldom be relied upon to destroy the carcinoma completely, invariably succeed in damaging the stroma to such an extent that its protective powers are lost. Direct and repeated questioning is often necessary before a patient admits to having had this escharotic type of 'cure'; the cases are by no means exclusively drawn from the less intelligent members of the community.

Left untreated, the ulcer grows and destroys the lip. Secondary nodes appear in the submaxillary and submental glands and later in the deep cervical glands; and these secondary glands enlarge and ultimately burst through the skin so that the primary and secondary ulcers fuse, forming a huge stinking, cancerous crater in whose base the mandible, grey-white and necrotic, is seen. Involvement of the mandible by direct continuity of the primary growth is common and occurs relatively early. The secondary glands do not involve the bone nearly as quickly, their capsule exerting a restrictive effect on the growth. The carcinoma is thus contained within the lymph glands for an appreciable time and, while the glands are often glued to the periosteum of the mandible by inflammatory reaction, the bone itself is invaded from the glands relatively late.

Apart from the extension to the submental and submaxillary glands, another form of lymphatic extension takes place along the lymph channels accompanying the mental artery and vein. In these cases a deposit of carcinoma develops within the mandible. It is recognized clinically by persistent bone pain, worse at night, and a radiograph shows a zone of osteolysis. The bone swells and finally fractures, the carcinoma breaks through into the mouth and an infective osteomyelitis adds to the general misery.

Distant metastases from blood spread are extremely rare, in our experience not more than 1%.

Histological Types. The vast majority of carcinomas were of the squamous and horny type with keratinization; less than 2% were anaplastic. Only a very small number are basal-cell carcinomas and there has been no difference observed in the response of these to treatment.

CLASSIFICATION

Since the lip, by virtue of its anatomical position, is a facial as well as a buccal organ, epithelioma develops on the facial aspect particularly in cases with a rodent ulcer diathesis, and the lesions in these is almost certainly solar in origin; this

group forms the great bulk of our European patients. The classification we propose is as follows:

1. *Cutaneous carcinoma of the lip.* This is external, typically starts at the red margin and, as stated, is the type seen in White patients (Figs. 2 and 3).

2. *Mucous or buccal carcinoma of the lip,* which typically occurs in Coloured patients, and should really be classified

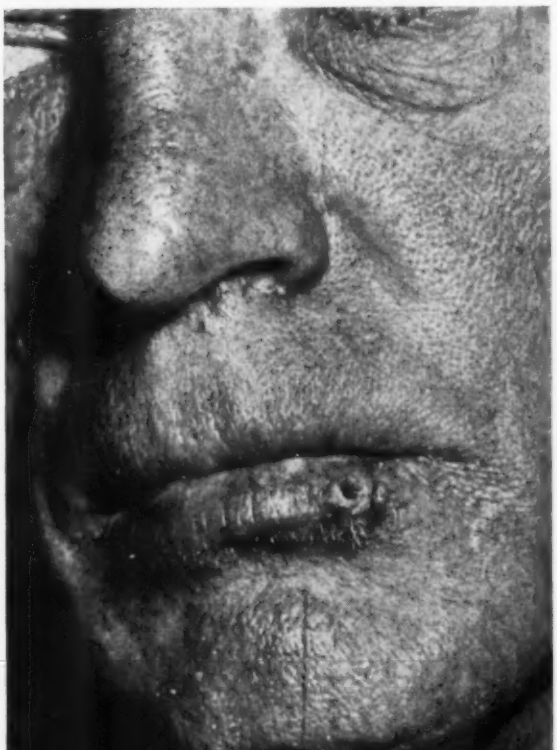

Fig. 2. A typical epithelioma of the lip in a White man. Cutaneous or external variety, prognosis good.

as a variety of cancer of the mouth (Figs. 4 and 5). It is histologically identical with the first variety, both being squamous carcinoma, and once it attains any size, it is also clinically indistinguishable.

3. *Angular cancer of the lip* has long been known to have a sinister significance. We can confirm this from our own experience, but feel that we cannot support the theory, commonly held and taught, that the bad prognosis is due to excessive mobility of the lip at the angles of the mouth, with a qetter-than-average lymph drainage at that part, which causes cancer cells to be massaged into the lymphatic circulation at an early stage. There is no reason why the lymphatic drainage from the angle of the mouth should be any better than that from the lip itself; indeed this has never been proved. If the lymphatic parallels the blood supply, the lymph supply at the angles is indeed very rich, but is no richer than elsewhere, nor do the angles of the mouth move any more actively than the lips themselves, a fact that can be easily

Fig. 3. A similar case. Growth a little larger, prognosis still good.

observed. A far more reasonable explanation, we submit, lies in the well established and easily proven observation that angular carcinomas usually start on the buccal side of the lip and adjacent cheek, and that the angular lip cancer when it becomes visible is only the top of the iceberg. This type of carcinoma, like the second variety, is also primarily a buccal cancer, and carries the bad prognosis of cancer of the mouth.[2] The common cancer of the lip in White people is primarily a disease of the skin, and runs the relatively benign course of facial cancers.[1]

DIAGNOSIS AND TREATMENT

Diagnosis. A biopsy is always done in all suspected cases, taking a piece of the neoplasm, together with a part of the adjacent normal tissue. Should the lesion be smaller than 0·5 cm. in diameter, a wedge excision-biopsy is performed with a 1-cm. margin on either side and this procedure is curative as well as diagnostic. Lesions that are larger are treated with radiotherapy.

Preventive Treatment aims at removing areas affected by leukoplakia and areas that show recurrent ulceration and break down repeatedly. A biopsy is always done in these cases and if the condition proves to be pre-malignant only, we advise *excision with advancement.* This operation consists of excising the affected mucous membrane and sliding it forward from the inside of the lip to the red margin. In effect, the operation removes the pre-malignant area of mucosa and

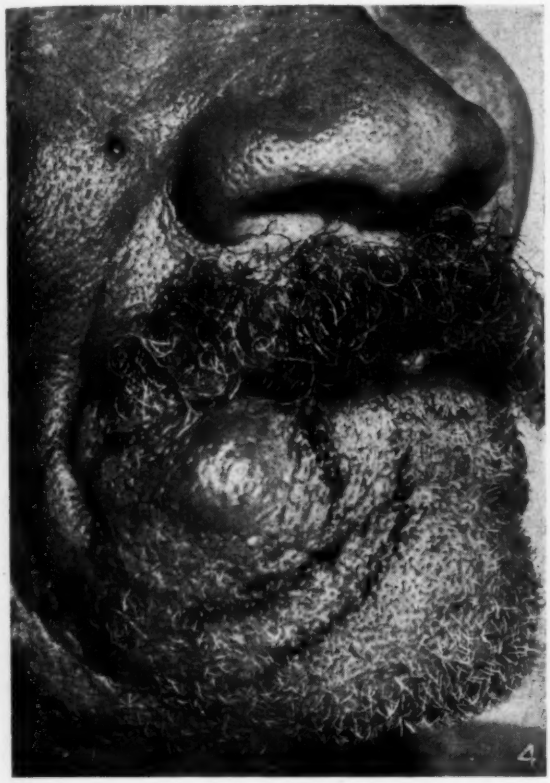

Fig. 4. A typical case in a Coloured male, second variety, showing oedema and swelling as a first sign.

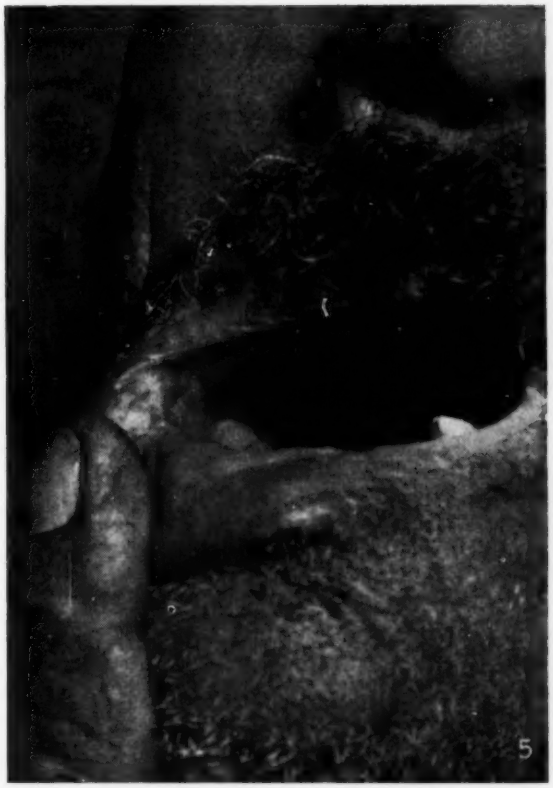

Fig. 5. The same case with lip everted to show the ulceration within.

replaces it with fresh mucosa from the unexposed part of the lip. We are indebted to the plastic surgeons who frequently perform this operation for perfecting the technique so that very little deformity is caused. The portion of tissue that has been removed is always examined microscopically, and should carcinoma be found in it, appropriate radiotherapeutic treatment is directed to the lip.

Radiotherapy in divided doses up to 5,000-6,000 r is the treatment of choice in the vast majority of cancers of the lip and is applied either by means of deep X-ray therapy or by means of a radium sandwich applicator. The reaction that occurs is followed by desquamation and later the tumour disappears. In many cases a hard nodule persists at the site of the original lesion. All cases are kept under observation, but as many of our patients live in inaccessible places up to several hundreds of miles away, the nodule is excised if still present at the return visit after 2 months. In a large proportion of such excisions the residual induration is fibrous only and no neoplasm is found on section. It is impossible to differentiate such innocent fibroses from residual malignancy by clinical palpation alone, and the removal of all suspicious nodules is therefore justifiable.

Surgery is indicated in the following conditions: (1) When radiotherapy has failed, (2) when a 'cancer paste' has been used, (3) when glands are invaded and palpable, and (4) when the mandible is involved. The surgery performed is a wedge excision, and if the apex of the wedge is carried down to the point of the chin and a margin of 1 cm. is left on either side of the tumour it is possible, with adequate mobilization, to draw the edges together in most cases without further plastic manoeuvres. The plastic surgeons have evolved various methods whereby larger portions of the lip can be removed with immediate reconstruction; these are to be described in a subsequent paper.[4]

Lymph Glands. Of our cases, 6% presented with invaded glands at the first visit. The treatment of the invaded lymph glands by radiotherapy has not been an unqualified success; we feel that surgery offers a far better chance of cure here, and all cases where the lymph nodes become firmly enlarged are treated by surgery. After radiotherapy a transient swelling of the submental and submaxillary glands, probably inflammatory, is to be expected, but this soon subsides and within 4-6 weeks the glands return to normal. The patients are observed at 2-monthly intervals for the first 6 months and later these intervals are increased to 3-4 months until an annual visit is reached; instructions are given that any sign of swelling in the neck should be reported immediately. Should the glands become clinically suspicious, surgery is undertaken.

We believe, as a result of several disappointing experiences with supra-hyoid clearance alone, that a total clearance of the neck glands, including the submental glands, will

alone suffice for safety. Removal of the internal jugular vein and the sterno-mastoid and clearance of the anterior and posterior triangles of the neck (Crile's operation) is the surgical procedure of choice. The mortality of both operations is negligible and the safety factor of the more extensive procedure is, we think, much greater. Diathermy is used throughout the operation because it is considered that this will prevent local implantation of carcinoma cells.[3] The operation takes a little over an hour.

After this operation, it is imperative to keep the patient under observation in case he develops mestatases on the opposite side. Should this happen, although it is rare in cases of lip carcinoma, an identical clearance is performed on the second side. The removal of both jugular veins, if an interval of 1 month elapses between the two operations, seems to lead to no difficulties with the venous return. In the ordinary way it is not considered practical to perform a total neck clearance in every case of carcinoma of the lip, because not every case develops secondary glands and there is no way that one can tell by examination of the primary whether metastases will occur or not. If the patient can be kept under regular observations and if he is intelligent enough to report at the first sign of swelling in the neck, the procedure can well be postponed. However, for the patients who live far away, and who cannot be persuaded to return betimes, a prophylactic clearance is advisable.

When the mandible has become invaded, more extensive operations are necessary and the invaded bone must be ruthlessly sacrificed. Our disappointments always occur because of recurrences in the stump of the mandible and we think this is due to insufficient removal of bone. Once the bone is invaded the whole of the alveolar canal is suspect, so that any excision must include the mandibular foramen of the side involved; if the symphysis menti is grossly invaded, both sides of the mandible, to include both mandibular foramina, should be removed. Repair after these extensive excisions is by a multi-staged series of operations and is carried out by the plastic surgeons attached to the Clinic.

Tracheotomy. Whenever the symphysis menti with the genioid tubercles require to be sacrificed or when the attachment of the geniohyoglossus to the mandible has been freed, the tongue falls back and an immediate temporary tracheotomy should be done before the patient leaves the table. This manoeuvre is life-saving and obligatory and the tracheotomy may be allowed to close after a few days.

PROGNOSIS

It will be observed from the analyses that have been presented of rodent ulcer,[1] of cancer of the lip and of cancer of the mouth,[2] that cancer of the lip lies about midway between the two other neoplasms in its seriousness and prognosis. It is less serious than cancer of the mouth but more serious than rodent ulcer. Mestatases develop rather more slowly than in the case of cancer of the mouth, and both the surgeon and the patient receive ample warning from the development of enlarged hard glands that the time has come to perform further surgery. Nevertheless, much misery is caused by the dilatoriness of many of our patients, who are prepared to tolerate a lesion on their lips because it is painless and pay no attention to its growth or to the development of glands. It is necessary to educate the public on the importance of early diagnosis and treatment.

The outlook in the average case of cancer of the lip is good. Our records show that there is a mortality of 6%, this proportion of patients dying of the disease. Examination of the records of these patients not unexpectedly shows that they are mostly late cases who came to the Clinic with glands already invaded, or whose primary lesion was more than 2 cm. in diameter at their first visit. Because his cancer tends to be intra-oral and not visible externally the Coloured patient often comes for treatment rather later than the European, whose lesion is external. For this reason too, the outlook in the Coloured case is worse than in the European.

The relative incidence of this disease in the European and the Coloured races (Fig. 1) bears a close resemblance to the relative incidence of rodent ulcer of the face, and since the only factor in which the two races differ is in the pigmentation of the latter, we thus feel that just as rodent ulcer is an actinic disease so is cancer of the lip. The typical patient has exactly the same diathesis as that found in cancer of the face and indeed many come up for treatment of both conditions.

Late cases and the 'cancer curer' are our problem, but there is encouraging evidence to suggest that if these late cases are tackled with resolution and in a spirit of hope, surprisingly good results can sometimes be obtained.

SUMMARY

1. Over 400 cases of cancer of the lip are presented and discussed.

2. The degree of malignancy found suggests that it is a less malignant disease than cancer of the mouth, but more malignant than rodent ulcer of the face.

3. Early cases can be treated successfully, with relatively simple methods; late cases show definite mortality and require massive operations to control the disease.

4. It is considered that the majority of our cases of cancer of the lip are due to solar irradiation.

5. A new classification of cancer of the lip is suggested.

I should like to thank Dr. J. Muir Grieve, Head of the Department of Radiotherapy at Groote Schoor Hospital, Drs. M. B. Bennett and R. D. Tucker, radiotherapists, and Prof. J. H. Louw and Mr. E. B. Malherbe, of the Department of Surgery, for their kind cooperation and interest in this work. The Medical Superintendent, Groote Schuur Hospital, is thanked for permission to publish these figures, and Mr. B. Todt for the photographs.

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The Council of the College of Physicians, Surgeons and Gynaecologists of South Africa have great pleasure in announcing that Prof. Robert J. Kellar, Professor of Obstetrics and Gynaecology of the University of Edinburgh, will be visiting the Union as the first Margaret Orford Trust Lecturer and will be speaking on 'Modern Views on the Toxaemias of Pregnancy' on 11 August 1958 at 8.15 p.m. at the Harveian Theatre, Medical School, University of Witwatersrand, Johannesburg.

EOSINOFIEL GRANULOOM VAN BEEN

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Eosinofiel granuloom van been is een van die groep siektes (op die oomblik gerieflikheidshalwe genoem histiositose X), of deel van die groter groep santomata. Die groep is reeds in 1851 deur Addison en Goll beskryf as 'n letsel met 'n groot bleek sel. Die eerste siekte van die groep wat beskryf is, Hand Schuller-Christian se siekte met sy drievoudige kenmerke van skedeldefekte, eksoptalmos en diabetes insipidus, is deur Hand in 1893 beskou as moontlik tuberkuleus van aard.

In 1919 het Christian die vermoede uitgespreek dat dit van pituitêre oorsprong is, terwyl Rowland[1] in 1928 aangetoon het dat die mees kenmerkende element van die letsel 'n santoom-sel is, nl. 'n histiosiet met cholesterol. Tannhauser[2] het in 1938 getoon dat dit verskil van die ander algemene santomata deurdat daar 'n verhoogde bloed-cholesterol aanwesig is. Die algemene opvatting vandag is dat dit essensieel 'n abnormaliteit van lipoïde metabolisme is (d.w.s. 'n santomatose) verwant aan Gaucher en Niemann Pick se siektes.[3]

Sedert die oorspronklike beskrywing is dit bevind dat die letsels nie alleenlik in die skedel nie, maar ook in die skelet voorkom—selfs sonder aantassing van die skedel; ook viscera en vel mag deur die siekteproses aangetas word.

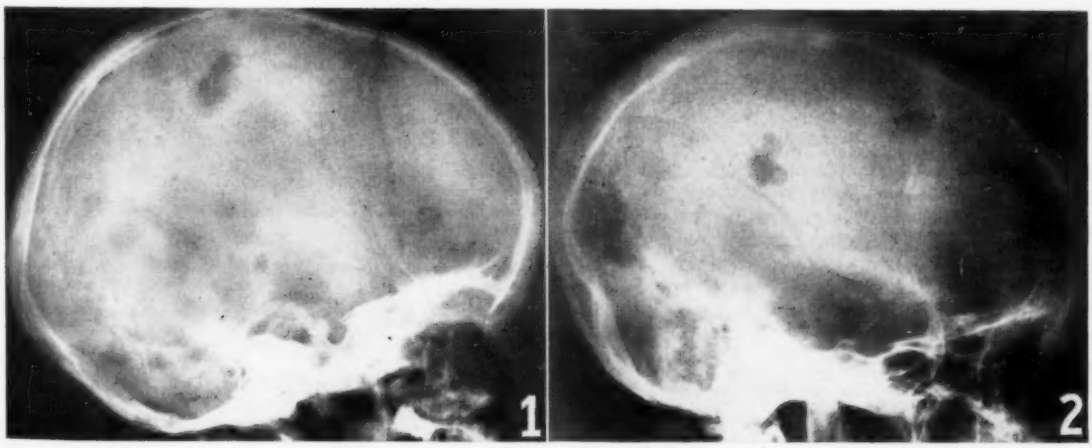
Baie pasiënte toon ook geen eksoptalmos of diabetes insipidus nie. Letsels in die skelet in die algemeen word nie meer as 'n vereiste beskou in die diagnose van die siekte nie; en as hul voorkom maak hul dikwels nie hul verskyning totdat letsels van die sagte weefsels reeds gevestig is nie.

Die siekte begin gewoonlik geleidelik en het 'n uitgerekte verloop oor baie jare, gewoonlik in volwassenes. Dit mag fataal wees, veral as daar ernstige skade aan die pituitêre klier berokken is, of as ernstige pulmonêre infiltrasie en fibrose in cor pulmonale en regterhartversaking geëindig het. Laasgenoemde is nie 'n ongewone uiteinde van die siekte nie. Dit is nie so algemeen bekend dat diffuse pleurale en interstisiële pulmonêre infiltrasie wat lei tot fibrose, heuning-koek-long, en aanvalle van spontane pneumotoraks taamlik algemene kenmerke van Schuller-Christian se siekte by volwassenes is nie; hulle word in die begin gewoonlik aanvaar as gevalle van sarkoïdose.

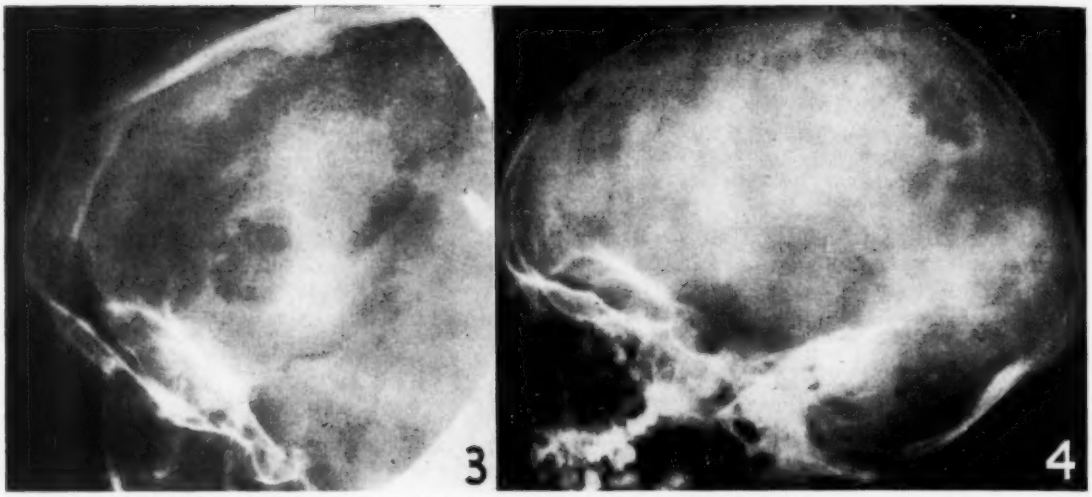
Die tweede siekte is dié van Letterer-Siwe wat in 1933-34 beskryf is: 'n akute of sub-akute en dodelike algemene retikulose by kinders, met koors en progressiewe anemie, waarby die kenmerkende sel 'n proliferende histiosiet sonder enige lipied is, wat gevolglik soms 'n nie-lipiede retikulose genoem word. Daar is bewys dat dit egter nie uitsluitlik by babas of jong kinders voorkom nie, maar ook sy ewebeeld in volwassenes het.

Die wydverspreide aantassing van die retikulo-endoteel stelsel gaan gepaard met opvallende splenomegalie en gewoonlik vergroting van lewer en limfkliere, velbloedings, en soms benige letsels. Mastoïede aantassing met swelsel oor die mastoïed en radiologiese tekens van been infeksie en beenvernietiging word deur Saenger *et al.*[4] genoem as kenmerkend by Hand Schuller-Christian se siekte. Een van hul gevalle wat geöpereer is het histiologies ingepas by Hand Schuller-Christian granuloom; een van ons gevalle van Letterer-Siwe se siekte toon radiologies dieselfde beeld.

Die oorblywende lid van die groep wat betreklik onlangs eers as 'n entiteit erken is, is die eosinofiel granuloom; Jaffe en Lichtenstein[5] asook Otani en Ehrlich[6] het dit in 1940 beskryf—'n enkelvoudige òf veelvuldige, stadig-groeiende letsel in feitlik enige deel van die skelet wat meestal ouer kinders aantas. Die letsels is dikwels klinies voelbaar as 'n gewas, nie gepaard met konstitusionele veranderinge nie, en genees òf spontaan òf met plaaslike terapie. Die kenmerkende sel was 'n eosinofiel granulosiet in 'n area van retikulo-endoteel proliferasie. Daar was ook histiosiete



Afbeelding 1 (Geval 1). Skedelfoto toon defekte wat dubbele buitelyn demonstreer by eosinofiel granuloom.
Afbeelding 2 (Geval 2). Nog 'n geval van eosinofiel granuloom wat die dubbele buitelyn by die skedeldefek toon.



Afbeelding 3 (Geval 3). 'n Dubbele buitelyn by 'n frontale beendefek by eosinofiel granuloom.
Afbeelding 4 (Geval 4), wat inpas by die sogenaamde Hand Schuller-Christian-sindroom; 'n dubbele buitelyn van defek in gewelf van skedel.

teenwoordig en gevolglik het Lichtenstein[9] die indruk gekry dat dit 'n patologiese manifestasie voorstel van 'n vroeë reaksie tot die etiologiese faktor, moontlik infektief van aard.

Met die oog op die feit dat die basiese kenmerk van al drie die siektes 'n histiosiet-woekering is, wat meer waarskynlik neoplasties dan inflammatories van aard is, en ook op die voorkoms van verskeie grensgevalle en gemengde gevalle, word hulle in die afgelope paar jaar as nou verwant aan mekaar beskou (Green en Farber,[8]). Die neiging is om die gevalle eerder volgens verspreiding van letsels te beskryf dan volgens 'n bepaalde siekte. So vind ons 'n aaneenlopende beeld vanaf 'n enkelvoudige nie-progressiewe beenletsel, deur meer of minder veelvuldige progressiewe beenaantassing, tot 'n akute wydverspreide letsel waar die beenpatologie oorskadu word deur die viscerale aantassing. Dundon *et al.*[9] het gevind dat enkelvoudige letsel drie maal meer dikwels voorkom as veelvuldiges. So mag oesinofiel granuloom nie alleen as 'n beenletsel op sigself voorkom nie, maar as 'n vernietigende proses in been wat in die verloop van Letterer-Siwe of Hand Schuller-Christian se siekte voorkom.

KLINIESE BEVINDINGE BY EOSINOFIEL GRANULOOM

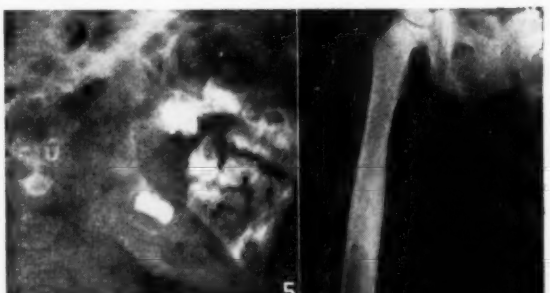
Die letsel is gewoonlik simptoomloos; soms is daar matige lokale pyn en teerheid en selfs swelsel, veral in platbene. Met skedelaantassing is daar soms hoofpyn; party maal kan die defek in die skedel gevoel word. 'n Spontane fraktuur mag die eerste aandag op die letsel vestig.

Waar die letsel as 'n fluktuerende swelsel voordoen wys geaspireerde vog eosinofiele. Geen kenmerkende bloedafwyking is aanwesig nie, maar eosinofilie gepaard met geringe koors mag voorkom.

Radiologiese Voorkoms

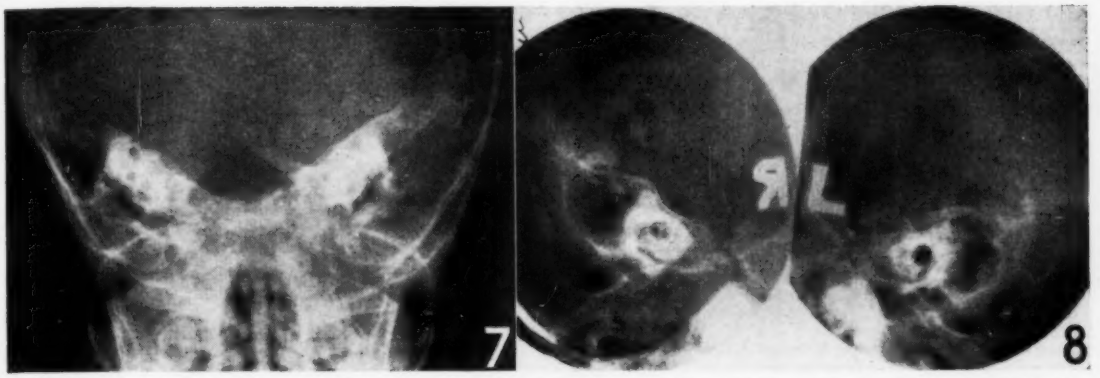
Die algemene beeld is dié van een of meer ronde of ovale osteolitiese defekte in been met min of geen sklerose nie, behalwe in lang bene waar daar gewoonlik sklerose aanwesig is; in laasgenoemde gevalle tas dit meestal die skag vanaf die endosteale kant aan. Periosteale reaksie is uiters seldsaam. 'n Aangetaste rib toon gewoonlik uitsetting terwyl dit totale versakking van 'n werwel mag veroorsaak; dit is een van die erkende oorsake van vertebra plana. Paul Wells[10] in 'n onlangse artikel vestig die aandag op 'n sekwester, die sogenaamde ‚button sequestrum' wat in 4 van sy gevalle voorgekom het in skedelletsels. Die voorkoms is dié van 'n deurskynende skedeldefek met 'n sklerotiese eiland daarin, en word deur Wells as 'n redelik algemene voorkoms in skedelletsels beskou.

Ons wil die aandag vestig op 'n ander kenmerkende voorkoms wat tot dusver onvoldoende in die letterkunde beklemtoon is, nl. 'n dubbele buitelyn van skedelletsels;

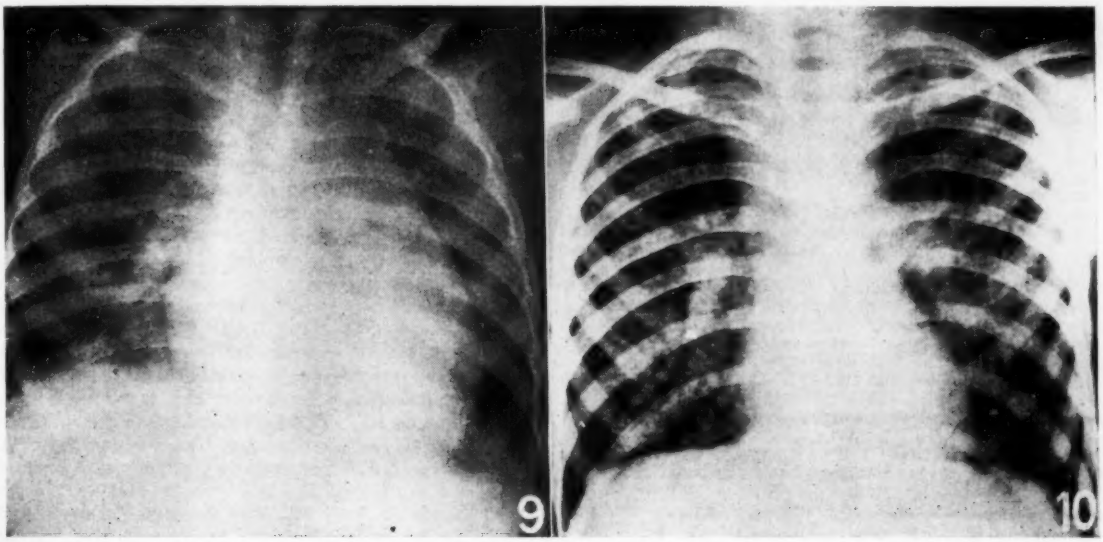


Afbeelding 5 (Geval 4). Goed omskrewe erosie van mandibula.
Afbeelding 6 (Geval 4). Erosie gepaard met sklerotiese periosteale nuwe been in femur, kenmerkend van die letsel in lang bene.

dit is te sien in verskeie illustrasies van gevalle reeds in die literatuur beskryf, en is waarskynlik te wyte aan ongelyke aantassing van die twee tafels van die skedel. Hierdie oneweredige vernietiging van die twee tafels van die skedel word genoem deur Fairbank[11] in gevalle van Hand Schuller-



Afbeeldings 7 *en* 8 (Geval 5). Wat uiteindelik gediagnoseer is as Letterer-Siwe se siekte. Demonstreer beenerosie in die mastoïde.



Afbeelding 9 (Geval 5). Daar is 'n miliêre beeld van die longe.
Afbeelding 10 (Geval 6). Growwe miliêre beeld van longe by 'n bewysde geval van eosinofiel granuloom. Verkalkte tuberkuleuse kliere in die nek is ook sigbaar. Hierdie pasiënt het ook osteolitiese letsels in die skedel gehad.

Christian se siekte, terwyl die dubbele buitelyn beskryf word deur Epstein en Davidoff[12] by skedel-dermoïd en epidermoïd, wat stereoskopies waarneembaar is. Hierdie skrywers toon ook illustrasies van gevalle van Hand Schuller-Christian se siekte waar die dubbele buitelyn van die defekte duidelik sigbaar is.

GEVOLGTREKKINGS

'n Dubbele buitelyn van die skedeldefekte by eosinofiel granuloom word beskryf. Hierdie bevinding kom nie uitsluitlik by eosinofiel granuloom voor nie, maar is volgens ons mening nie genoeg beklemtoon in die literatuur oor die eosinofiel granuloom nie.

SUMMARY

Attention is drawn to the double outline of skull defects in eosinophile granuloma. This is not pathognomic of eosinophile granuloma, but is frequently seen and has not received sufficient emphasis in the literature.

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CEREAL GRAIN DUSTS AS A CAUSE OF RESPIRATORY ALLERGY IN SOUTH AFRICA

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Cereals (especially wheat) are recognized among the important foodstuffs which on *ingestion* produce respiratory, gastro-intestinal or skin manifestations in food-sensitive persons. It is less well known, however, that the *inhalation* of dusts derived from cereals may induce symptoms of respiratory allergy—vasomotor rhinitis and bronchial asthma.

References to this subject in the literature are rather scant and generally describe a few cases only; and in some instances the causation of symptoms is attributed to contaminants in the cereal dust rather than to the grain flour itself.

Goodale[1] (1916), Walker[3] (1920) and Frugoni and Ancona[3] (1927) believed that flour dust could cause asthma and rhinitis. Walzer[4] (1931) stated that cereals, particularly wheat, acted as excitants of hypersensitivity by inhalation, ingestion and contact and referred to bakers with symptoms from the inhalation of flour dust but who could ingest flour in all forms. Rackeman[6] (1931) described cereal sensitivity in 8 bakers, 3 housewives and in 3 other persons. Duke[6] (1935) described 4 wheat millers with asthma but thought that the causative factor was a foreign-body reaction or a sensitization reaction to the small sharp wheat hairs and the outer cells that get into the air. He obtained positive skin reactions with an extract of the grain dust but the results of treatment were not satisfactory. Tuft[7] (1938) thought that wheat flour was the most important and the most frequent offender of the entire cereal group. Van Dishoeck and Roux[8] (1939) examined 262 workers in bakeries and mills in Amsterdam and found 25% of them sensitive by skin test to wheat, oat, or rye flours. Nearly all the positive reactors either suffered or had suffered from one or more 'flour illnesses' while in the negative reactors respiratory illness or eczema were seldom found. In the same year Najera and Dantin[9] reported asthma in 25 of 115 millers in Paris and noted that cutaneous lesions were also common. They believed however that both respiratory and skin lesions were due to mites (*Acari*) in the inhaled dust, especially in old oat and bean flour mills. Unger[10] (1945) stated that the inhalation of grain dust as a cause of asthma was important in farmers, in those connected with the flour industry and in housewives and that, while most bakers had no symptoms, those susceptible sooner or later developed rhinitis or asthma or both. He quoted Hlavack's report[11] (1937) of 8 out of 70 bakers sensitive to wheat and rye, and that of Rastelli and Brambilla[12] (1937) who obtained positive skin reactions to wheat in 25 of 100 exposed peasants, mill workers and unskilled labourers (there were only 2 persons with asthma amongst the 25 'positives'). He was of the opinion that the respiratory symptoms in farmers and mill workers were due to the flour itself or to moulds, smuts, rusts, and insects contaminating the flour.

The possibility that fungi, rust and smuts play an allergenic part in inhalant cereal sensitivity has long been considered. Blackley[13] (1880) suspected moulds and Cadham[14] (1934) reported asthma due to contamination of wheat by rust. Wittich and Stakman[15] (1937) found smuts spores in sputum and positive skin reactions to most grain smuts in persons exposed to wheat in mill dusts, and concluded that smuts frequently augmented the severity of symptoms in grain-sensitive patients. Since then Fawcitt,[16] Wittich,[17] and Harris[18,19] have described the association of moulds, rusts and smuts with cereals in producing symptoms and Wittich[20] (1940) in a consideration of various mill-dust allergens concluded that smuts allergy and grain-dust allergy were closely related although they did not possess the same allergens, and that mill-dust allergen not only included the grain flour itself but that pollens, moulds, smuts, rusts, bacteria and insect fragments present in the flour had a relative importance in producing respiratory and skin allergy.

CEREAL-GRAIN SENSITIVITY IN SOUTH AFRICA

In the course of my investigating patients with allergic vasomotor rhinitis and asthma over the years a broad pattern has emerged of respiratory allergy in persons handling cereals occupationally or otherwise, the symptoms in each instance resulting from the inhalation of the dusts of the cereals. This paper describes sensitivity to the inhalation of cereal dusts in South Africa and emphasizes the value of desensitization by the use of specific extracts.

Cereals are members of the grass families (*Graminae*) which have edible starchy seeds or grains and thus yield food to man. The cereals include maize or mealies (*Zea mays*), wheat (*Triticum* spp), kaffir-corn (*Sorghum vulgare*), rye (*Secale cereale*), oats (*Avena sativa*), barley (*Hordeum vulgare*), rice (*Oryza sativa*).

The growing of one or more of the winter cereals—wheat, oats, barley and rye—constitutes a part of the farming practice in most districts of the Union of South Africa.

Maize (mealies) is the most important crop in the Union and is a basic South African foodstuff. It is the staple diet of the majority of the non-Europeans and of many Europeans and it is also extensively used in cattle feeding. Maize is grown mainly in the Eastern Transvaal highveld, the northern part of the Orange Free State and the central Western Transvaal. The so-called 'maize triangle' of the Union is indicated approximately by Bethal in the east, Lichtenburg in the west and Ladybrand in the south. On every farm maize is kept in store-rooms for cattle, pig and fowl feeding so that the inhalation of maize dust can occur at any time of the year.

Wheat, also a basic foodstuff in South Africa, is grown in the Western (Cape) Province, the Orange Free State, and districts in the Transvaal.

Kaffir-corn, traditionally used as a foodstuff in South Africa, has now largely been replaced by maize. The most important market for kaffir-corn is in the manufacture of malt for kaffir beer. It is grown mainly in the Northern and Western Transvaal.

In the period 1949-57, 128 'treatment sets' of extracts of cereals were issued for desensitization purposes in patients clinically sensitive to the inhalation of dusts from the various cereal grains. The incidence of specific cereal sensitivities is analysed in Table I. It will be observed that 76 (56·7%) of the treatment sets issued were for a single cereal and 52 (43·3%) for combined cereal extracts for simultaneous desensitization. Further, it will be noted that sensitivity to maize was en-

TABLE I. SPECIFIC CEREAL SENSITIVITIES AS REPRESENTED IN 128 TREATMENT SETS OF CEREAL EXTRACTS, 1949-57

Sensitivity	*Number*	*Maize*	*Wheat*	*Kaffir-corn*	*Oats*	*Rye*	*Rice*
One cereal only	76 (=56·7%)	43	21	5	3	1	3
Two or more cereals	52 (=43·3%)	49	29	24	16	8	5
Totals	128	92	50	29	19	9	5
		71·9%	39·1%	22·7%	14·8%	7·0%	3·9%

TABLE II. CEREAL SENSITIVITIES IN 76 PATIENTS INVESTIGATED, 1952-57

Sensitivity	*Number*	*Maize*	*Wheat*	*Kaffir-corn*	*Oats*	*Rye*	*Rice*
One cereal only	38 (=50%)	23 (13)	13 (8)	1 (0)	0	0	1 (1)
Two or more cereals	38 (=50%)	28 (13)	23 (11)	15 (7)	10 (6)	5 (4)	1 (1)
Totals	76	51 (26)	36 (19)	16 (7)	10 (6)	5 (4)	2 (2)

The numbers of patients in which sensitivity was confirmed by skin tests are shown in brackets.

countered in 71·9% of instances, to wheat in 39·1% and to kaffir-corn in 23·7%. Too much should not be read into the significance of these figures because they probably merely reflect the relative degree of exposure of patients to these different cereals. It is clear, however, that sensitivity to cereal inhalation producing symptoms of respiratory allergy is a definite hazard in South Africa and should be borne in mind, particularly in persons who are brought into contact occupationally with maize and wheat. The cereal-inhalation aetiology of asthma and vasomotor rhinitis, especially in the maize areas of the country, is often overlooked.

The realization in 1952 of the significance of allergic sensitivity to cereals by inhalation in South Africa stimulated a close study of each case that subsequently came to our notice.

The milling, bagging and other handling of cereals in the Union are carried out largely in the rural districts, and for this reason it was only possible in relatively few cases personally to interview the cereal-sensitive patients involved in order to obtain full clinical and other details for proper scientific assessment. Under the circumstances it was necessary to enter into correspondence with the doctors about their patients. A large body of information was indeed collected in this way; but, as with all questionnaire-correspondence schemes, the necessary details were not always readily obtained and in some instances, in spite of repeated requests, hardly any particulars were submitted.

Specific extracts were prepared from clean dry cereals free from visible mould or other foreign matter and microscopically not in any way grossly contaminated with rusts and smuts. These extracts were sent to all practitioners reporting cases of cereal sensitivity and they were asked to perform skin tests to confirm the clinical suspicion of cereal sensitivity. In addition, in order to complete the pattern of reaction to inhalant substances, each patient was also to be tested with extracts of other inhalant substances commonly of significance in South Africa, viz. pollens (compositae, grasses, acacia, cypress), animal dander (cat, dog and horse), feathers (chicken and goose) and house-dust. Many of the patients were also submitted to skin tests with extracts of air-borne fungi representing the commoner local varieties of atmospheric moulds.[21] This was done to ensure that cereal sensitivity reactions were not complicated by sensitivity reactions to moulds, which are universally present and may be associated with growing cereals and other plants. There was, however, no evidence that such fungi played a part in the hypersensitivity symptoms of the patients. The patients were not especially tested with extracts of rusts and smuts as the cereals used in extract preparation were free from appreciable contamination with these.

In the 5-year period ending June 1957, 76 patients with cereal sensitivities were investigated and the details of their sensitivities are shown in Table II. It will be seen that 50% of the patients investigated were specifically sensitive to a single cereal only whilst the remainder were simultaneously sensitive to a number of cereals. In the latter group of 38 patients as many as 23 (60·5%) were sensitive to both maize and wheat with or without sensitivity to other cereals, and 15 (39·5%) showed a sensitivity to lucerne in addition to sensitivities to various cereals. It will be observed also that in the cases studied 53·3% of clinical cereal sensitivities were confirmed by skin tests. In the remaining 46·7% skin tests had, for one reason or another, not been carried out. In no instance, however, was a negative skin reaction obtained in a clinically sensitive person; on the contrary, in a number of patients where skin tests were systematically done with a series of different cereal extracts, positive skin reactions were obtained to cereals to which the patient evinced no clinical sensitivity.

It will again be noted in this group of cases that the incidence of maize sensitivity was the highest, followed by sensitivity to wheat and kaffir-corn and to a considerably less extent to oats, rye and rice.

The occupational distribution of patients with their specific cereal sensitivities is shown in Table III. It will be observed that most of the patients were employed on farms, mills and grain stores. In a few instances housewives unassociated with farming life developed symptoms when handling wheat or other flour during baking. Of 34 workers on farms 16 were sensitive to maize, 7 to wheat, 4 to oats, 2 to kaffir-corn and 3 to other cereals.

Desensitization of Cereal-sensitive Patients

In every case where a patient was found sensitive to cereals by inhalation we recommended desensitization by the use of the specific cereal extracts prepared singly or in combination as indicated. Desensitization was carried out entirely by the *intracutaneous* technique, proceeding gradually

TABLE III. OCCUPATIONAL DISTRIBUTION OF 76 CEREAL-SENSITIVE PATIENTS, 1952-57

Occupation	*Maize*	*Wheat*	*Kaffir-corn*	*Oats*	*Rye*	*Rice*
Farm[a]	16	7	2	4		
Grain-store Workers	4	3	1	1		1
Mill[b]	5	3	2	1	1	
Bakery Workers		1				
Housewives	2	4	1			
Others[c]	9	7	1	3	3	1
Not known	15	11	9	1	1	

(*a*) Farmers, farmers' wives and farming students. (*b*) Millers, graders and fitters. (*c*) Children, students and others.

TABLE IV. DESENSITIZATION OF PATIENTS SENSITIVE TO (*a*) MAIZE, (*b*) WHEAT, (*c*) MULTIPLE CEREALS, (*d*) RICE

Case No.	*Sex, Age, Occupation*	*Clinical Condition*	*Family History of Allergy*	*Skin Reactions to Commoner Inhalants*	*Cereal Sensitivity (a)*	*Circumstances of Sensitivity*	*Desensitized with Extracts of:*	*Results of Desensitization (b)*
					(*a*) MAIZE			
2	Man, 44. Store-manager	Vasomotor rhinitis and asthma	Sister asthma	Nil	Maize	Symptoms commence when working with mealie meal, or 'fowl food' containing maize.	Maize	Complete absence of symptoms since treatment—*a signal success. Patient says, 'My life was a hell on earth and now I feel like a municipal bull'.*
22	Man, 19. Agricultural student	Vasomotor rhinitis and asthma	Yes	Compositae and grass pollens	Maize	Attacks occur after crushing mealies and cutting up maize for silage. Has had hayfever from childhood which has continued ever since. Asthma from 7-11 years of age. He has a number of food sensitivities but is able to eat maize porridge.	Maize	*A few weeks after desensitization commenced there were no longer symptoms when harvesting maize. There has been a steady improvement. No more hayfever.*
28	Housewife, 33	Vasomotor rhinitis		Compositae and grass pollens, feathers, house-dust, orris root	Maize	Symptoms from inhalation of maize dust and maize products; also when passing a maize field in flower (probably grass pollen sensitivity)	Maize, compositae and grass pollens, feathers, house-dust, orris root	*She has had no further symptoms from maize meal.*
30*a*	Farmer's wife	Vasomotor rhinitis and asthma		Nil	Maize	Symptoms develop when entering the store where the grain is kept and when feeding fowls.	Maize	*After desensitization she has had no further attacks in spite of her continuing her former activities. A most successful result.*
35	Boy, 14. Scholar	Vasomotor rhinitis and slight asthma	Yes		(Maize)	Symptoms follow the inhalation of dust from the milling of mealies. Urticaria developed on one occasion from the eating of porridge made from unwashed mealie meal. Can eat this porridge if the maize is first washed.	Maize	*Excellent result. No more asthma and only occasionally hayfever.*
37	Farmer's wife, 51	Vasomotor rhinitis	Yes		Maize	Symptoms are associated with the handling of maize.	Maize	*After a few injections of maize extract the attacks began to decrease in severity after handling maize meal. After completing the course there were still some symptoms when in contact with maize but the attacks are much milder and easily controlled by antihistamines; whereas before the course of injections she had just about all the antihistamines on the market with no beneficial effect at all.*
39	Housewife, 38	Vasomotor rhinitis, asthma and summer hayfever (grass pollen)	Yes	Compositae and grass pollens	Maize	Symptoms occur when working with maize meal, bagged mealies and samp.	Maize, grass pollens	*Very marked improvement after the first course of injections.*
52	Man, 35. Shopkeeper	Vasomotor rhinitis and slight asthma	No		Maize	Symptoms occur when serving in the shop once or twice a week. Has worked with cereals for nearly 10 years intermittently. He vomits after eating mealie-meal porridge.	Maize	*After desensitization there was a marked improvement to the inhalation and ingestion of mealie meal.*
57	Man, 18. Farmer	Vasomotor rhinitis and summer hayfever (grass pollens)	Yes	Grass pollen feathers, housedust	Maize	Symptoms occur during the milling of maize on the farm.	Maize, grass pollen, house-dust	*There was marked improvement until desensitization injections were neglected.*
					(*b*) WHEAT			
16	Man 48. Wheat-grader	Vasomotor rhinitis and asthma	Daughter hayfever	Compositae and grass pollens, feathers, house-dust	Wheat	Symptoms commence when entering grain store during wheat-testing time and when working in the sheds with wheat.	Wheat	*Benefited from the first course of injections. Desensitization restarted 6 months later helped a little.*
17	Woman, 16. Bank-clerk	Vasomotor rhinitis	Sister sinusitis		Maize wheat, kaffircorn, rye	Symptoms occur when baking and also from the inhalation of wheat flour dusted on to cakes and pastries, with occasional urticaria under those circumstances.	Maize, kaffir corn, wheat, rye	*Definitely a marked improvement. No further attacks of urticaria and only occasional hayfever.*

Case No.	Sex, Age, Occupation	Clinical Condition	Family History of Allergy	Skin Reactions to Commoner Inhalants	Cereal Sensitivity (a)	Circumstances of Sensitivity	Desensitized with Extracts of:	Results of Desensitization (b)
48	Housewife, 55	Vasomotor rhinitis	Yes		Wheat	Symptoms occur when baking bread or cakes in the last 10 years, although has been working with flour for 40 years.	Wheat	*After completion of the course the patient said she had not felt so well for many years and was once more able to indulge in her favourite pastime—baking.*
49a	Housewife, 46	Vasomotor rhinitis and summer hayfever (grass pollens)			(Wheat)	Symptoms from inhalation of wheat flour during baking	Wheat, compositae and grass pollens, acacia, cypress, cat and dog hairs, feathers, house-dust	*After desensitization her hay-fever and sensitivity to wheat have greatly decreased.*
					(c) MULTIPLE CEREALS			
10	Schoolboy, 8	Asthma			Maize, kaffircorn	Symptoms appear when feeding the large number of fowls his parents keep and also on entering the feeding sheds.	Maize, kaffircorn	*This small boy, who was getting severe attacks of bronchial asthma as a result of the exhibition of maize and kaffircorn dusts, made a marked recovery. There has been no major attack since desensitization began. His mother says he has never looked so well. He is eating and sleeping much better, is less irritable, and is gaining weight.*
40	Man, 21. Miller	Vasomotor rhinitis and asthma	Yes		Oats, wheat, maize, kaffircorn, rye	He has been working for a year in his father's mill. Symptoms occur when in contact with cereal dusts. As a child he developed urticaria when playing in kaffircorn heaps. Has had vasomotor rhinitis since the age of 10 years.	Oats, wheat, maize, kaffircorn, rye	*Slight improvement only. He now spends much less time in these dusts and only sneezes now.*
54	Storeman-grader in mill, 43	Asthma			Wheat (maize)	Symptoms occur when loading wheat and maize on trains.	Maize, wheat	*The patient has had 2 courses of injections. He has been almost completely free from asthma since. He is still at his old job, but is so much better that he is able to continue, whereas before the injections I was on the point of letting him resign.*
67	Man, 50. Grain-elevator operator	Vasomotor rhinitis and asthma	No	House-dust	Maize, wheat	Symptoms occur on contact with wheat and maize.	Maize, wheat	*Although he still handles wheat and maize there has been marked improvement since desensitization. Previously he had to use decongestants 4-hourly, which are now used perhaps once at night. Two polyps in the left nasal passage had become markedly reduced in size.*
					(d) RICE			
72a	Woman. General dealer's assistant	Vasomotor rhinitis			Rice	Symptoms occur in the store when weighing out and packaging rice.	Rice	*Considerable improvement.*

(a) Where the name of the cereal in this column is enclosed in brackets the sensitivity was not confirmed by skin testing. In all the other cases the sensitivity was confirmed by skin testing.
(b) The comments of the practitioner in the case are printed in italics.

with injection of extracts from 1/1,000 to a 1/1 (concentrated) strength given 2-3 times a week, aiming with each injection to produce a wheal about 2 cm. in diameter. With the concentrated extract the intervals between the injections were gradually increased until the patient received a 'maintenance' injection every 8-12 weeks.

Results of Desensitization. It was possible in 18 cases to follow up the progress of patients who had been submitted to the recommended courses of desensitization. The relevant details of these patients are given in Table IV.: (*a*) 9 cases of maize sensitivity, (*b*) 3 cases of wheat sensitivity, (*c*) 5 cases of multiple cereal sensitivities, (*d*) 1 case of rice sensitivity. A study of these cases shows that the results of desensitization with extracts of the specific cereals to which the patients were sensitive was, in general, very effective.

SUMMARY AND CONCLUSIONS

An investigation is described into the occurrence of allergic vasomotor rhinitis and bronchial asthma resulting from the inhalation of cereal grain dusts in the Union of South Africa.

Sensitivity to maize and wheat showed the highest incidence in 128 cases that came to notice but sensitivity to kaffir-corn, oats, rye and rice also occurred.

A study was made of 76 patients with single or multiple cereal inhalation sensitivities.

Cereal-dust sensitivity occurred mainly in persons occupationally handling the grain, as in farmers and workers in mills and grain stores. It was, however, also found in housewives and others who only occasionally had contact with grain dusts.

Details and the circumstances of sensitization are given

of 18 cereal-sensitive patients with symptoms of respiratory allergy. In these patients the progress could be followed and the results of desensitization assessed.

Specified cereal desensitization in inhalant cereal respiratory allergy is shown to be very satisfactory.

Thanks are due to the physicians in various parts of South Africa who made this investigation possible by notifying us of cases of cereal-dust sensitivity that came to their notice and by kindly supplying clinical and other details of their patients at our request. A special word of gratitude is expressed to the medical men who carried out specific cereal densensitization and reported their results.

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ELEVENTH WORLD HEALTH ASSEMBLY

ELEVENTH WORLD HEALTH ASSEMBLY

The Eleventh World Health Assembly concluded its 3-week session, under the chairmanship of Dr. Leroy E. Burney, Surgeon General of the US Public Health Service. The Assembly opened on 28 May, after a two-day special session commemorating the Organization's 10th anniversary and was attended by delegates of all 85 active member states, the largest participation in WHO's history. Also in attendance were observers representing the United Nations and its specialized agencies and 32 non-governmental organizations. The following items were highlighted in the Assembly discussions and action:

1. Moving malaria eradication programmes into high gear.
2. A call for greater emphasis on research, towards which the USA contributed a special fund of $300,000.
3. A comprehensive WHO programme to deal with health implications in the peaceful uses of atomic energy—a USSR proposal supported by the USA and 21 other countries unanimously adopted.
4. Steps taken towards a world-wide programme for the eradication of smallpox.
5. The new WHO field of sports medicine.

The 1959 public health programme, adopted by the Assembly, including nearly 800 projects in nearly every country and territory in the world, also calls for the extension and intensification of the world-wide programme for the eradication of malaria, increased control of smallpox and a general broadening of programmes in the fields of venereal diseases and treponematoses, endemo-epidemic diseases, public health administration, nursing, maternal and child health, mental health, and nutrition. To finance this work in 1959, the Assembly adopted unanimously its largest annual budget to date—$14,287,600. The Organization is called upon to orient its health programmes more than ever towards a primary objective of WHO—the strengthening of national public-health services.

The Leon Bernard Foundation award was conferred on Dr. Thomas Parran, a former Surgeon General of the U.S. Public Health Service. He was chosen, Dr. Burney stated, for his outstanding contributions in the development of the Public Health Service, particularly in expanding national control programmes against venereal diseases, tuberculosis and cancer and for his promotion of large-scale hospital construction throughout the United States. In thanking the Assembly, Dr. Parran proposed that all member states of WHO, in addition to their regular contributions, should take 2% from their annual military appropriations to use as an extra contribution to the UN expanded programme of Technical Assistance, in which WHO would have a substantial share. This, he said, would speed up the eradication of malaria, followed by smallpox, tuberculosis, syphilis and yaws, permitting WHO to turn its energies to general mental and physical health improvement and 'to the most difficult task of all, the improved harmony of human relations'.

First Ten Years of WHO. The Director-General presented a very comprehensive report on the 'First Ten Years of WHO', which reviews the first decade of work in all the major fields of WHO activity since its inception in 1948. The Assembly noted 'with satisfaction the progress achieved in the development of health services, the reduction of communicable diseases all over the world, and the initiation of eradication programmes in certain communicable diseases, notably that of malaria'.

Survey of World Health Situation. A new compilation prepared by WHO, covering the period 1954-56, presents for the first time a comprehensive survey of health conditions throughout the world and summarizes the achievements—and the hopes for the future—of the various national health services. It contains descriptions and appraisals of health programmes completed or in progress in 157 countries and territories, embracing some 76% of the world's population. The Assembly asked WHO to prepare a second report covering the ensuing period, 1957-60 for submission to the 1962 World Health Assembly.

Major Items of Health Programme

Malaria Eradication. A significant extension of this work was reported by many delegates, showing that eradication is now under way in 76 countries, embracing nearly one-third of the world's population. It was stressed, however, that much greater international financing is essential to bring to a successful conclusion this first concerted effort to eradicate a major disease from the whole world in a relatively short period of time. So far, a little over $5,000,000 has been contributed to WHO's Malarial Eradication Special Account, an amount only sufficient to complete this year's programme. UNICEF contributed $8,000,000 in 1957 and the same in 1958 and has earmarked an equal amount for 1959. UNICEF plans to reduce its contribution after 1959 to $4,000,000 annually, when strong international assistance will still be necessary. The Assembly authorized the Director General to seek funds for malaria eradication not only from governments, but from all possible sources, including foundations, industry, labour organizations, institutions and individuals. The Soviet Union delegate announced that his government was donating 100,000 tons of DDT to WHO and that the USSR could make available technically qualified experts. WHO was requested to promote further research in the field of malaria, particularly regarding the development of mosquito resistance to insecticides.

Research. The Director General was requested to 'organize and arrange for a special study of the role of the Organization in research and of ways in which WHO might assist more adequately in stimulating and coordinating research and developing research personnel'. For this purpose the Government of the United States is making available some $300,000 to WHO to

set up studies for ways and means by which research can best be promoted.

Health Aspects of Atomic Energy. The Assembly showed considerable interest in the health aspects of the peaceful uses of atomic energy and requested the Director General to investigate concrete measures for dealing with this problem. He was called upon to report especially on methods for ascertaining and recording the radiation exposure of individuals from all sources; for determining the relationship between radiation dosage and congenital defects; and for notifying public-health authorities of congenital defects which might be due to radiation. This action, based on a proposal made by the USSR, joined by the USA and 21 other sponsoring countries, opens the way for the Director General to aid under-developed countries in the use of radio-active isotopes in medicine; and for a study to be made on the effect of radiation on human heredity and the relationship of radiation to health in general. In adopting this proposal the Assembly cautioned WHO to avoid any overlapping or duplication of effort with the International Atomic Energy Agency, with which it is to cooperate in the field of health.

Smallpox Eradication. The Director General was requested to study the possibilities and the practical implications involved in a universal programme of smallpox eradication, taking into account the financial, administrative and technical factors concerned. Meanwhile, governments throughout the world are urged to continue the fight against smallpox with vaccination and revaccination campaigns, and medical scientists are called upon to work towards the production of improved smallpox vaccine resistant to high temperatures. It was announced that the USSR is donating 25,000,000 doses of smallpox vaccine to WHO, and that the Cuban Government has offered 2,000,000 doses of vaccine annually to the Organization, for the control of this disease.

Poliomyelitis. The subject of poliomyelitis control evoked considerable interest. There were reports from a number of countries on the successful use of the so-called Salk killed-virus vaccine, with complaints from some delegates that its high cost prevented its extensive popular use in their countries. Keen interest was shown in the experiments now under way in various parts of the world in polio immunization through the use of the attenuated live-virus vaccine, which is administered orally. The Assembly considered that, at this stage, it is too early to approve or advocate the popular use of the live-virus vaccine.

Sports Medicine. WHO has launched into a new field, that of sports medicine, as the Assembly called for studies to be made in collaboration with the International Federation of Sports Medicine, one of the non-governmental agencies in official relationship with WHO. The studies will include the role of exercise and training in a constructive health programme. There was some opposition to this proposal on the grounds that WHO's budget was too slender for this diversion while infectious diseases and other health problems are so widespread.

Administrative

Voting Future Budgets. The Assembly decided that in the future, WHO budgets must be approved by a two-thirds majority rather than by a simple majority as at present.

WHO Membership Approaches Universality. The fact was stressed that, from an initial membership of 26 countries in 1948, WHO had grown to 88 in a decade. From a 1948 budget of $5,000,000, there had just been voted a regular budget of nearly $14,300,000, to which was to be added a supplemental $6,000,000 of UN Technical Assistance funds and nearly $9,000,000 contributed so far to the special malaria eradication funds of WHO and its regional office in the Americas. UNICEF had also made important allocations of material supplies to the governments concerned. In 1957 the collection of contributions from active member countries reached 97·08%—the highest collection record in WHO's history.

Executive Board Elections. Following the elections to fill the place of members whose three-year terms expire this year, the 18-member Executive Board now includes Afghanistan, Australia, Brazil, Canada, Federal Republic of Germany, France, Guatemala, India, Iran, Italy, Liberia, Mexico, Tunisia, USSR, United Arab Republic, USA, UK and Viet Nam.

The Assembly Officers are as follows: *President*, Dr. Leroy E. Burney, Surgeon General, U.S. Public Health Service. *Vice-Presidents*, Dr. J. Anouti, Director General, Ministry of Public Health, Lebanon, Dr. A. Sauter, Director of Public Health, Switzerland, and Dr. Tran Vy, Health Minister, Viet Nam. *Major Committee Chairmen*: Committee on Programme and Budget, Prof. N. N. Pesonen, Director General of the State Medical Board, Finland; Committee on Administration, Finance and Legal Matters, Mr. S. Khanachet, Member of the Saudi Arabian Legation in Bonn.

Next Assembly. The Twelfth World Health Assembly will meet in 1959 at its headquarters in Geneva, Switzerland.

WORLD STATISTICS ANALYSED

A recent WHO statistical report[1] shows a continuous *decrease* in mortality from infections and parasitic diseases and from complications of pregnancy and childbirth and an *increase* in mortality from cancer of the respiratory system and diseases of the heart and liver. Of the 'modern' diseases, cancer of the respiratory system is the cause of death that is most rapidly growing in importance in the majority of highly developed countries.

Safer Childbirth

In 28 countries mortality from pregnancy and childbirth dropped almost 50% between 1950 and 1956. The maternal mortality rates (per 100,000 live births) reported for 1956 (or 1955 where so shown) are as follows: New Zealand 44·1 (1955), USA 47 (1955), Denmark 48·2, Israel (Jewish population) 48·4, Sweden 49·4 (1955), Scotland 53·5, France 55·3, Australia 56·1, England and Wales 57, Northern Ireland 57·6, Canada 61·7, Netherlands 67, Norway 67·7 (1955), Belgium 80·4 (1955), Ireland 85·6, Switzerland 104·3 (1955), Finland 111·4, Austria 121·7. The highest recorded rate was in Ceylon (376·5).

Pakistan Smallpox Epidemic

Two million doses of smallpox vaccine are being shipped by WHO to Pakistan in answer to a request from the Government. Preliminary figures received so far this year (1958) indicate that there have been more than 35,500 cases and 15,800 deaths from smallpox in Pakistan (nearly all in the Eastern part of the country) as compared with 13,400 and 5,900 for the same period last year. High incidence of this disease is observed as a rule every 6-7 years, and the number of cases has been increasing steadily since 1954, reaching almost 25,000 in 1957. This is higher than that recorded in 1950, the last peak (21,610). Mass vaccination is expected to prevent a repetition of the 1944 catastrophe, when there were 140,000 deaths from smallpox in the whole of Bengal (since divided into East Pakistan and India's West Bengal).

Cholera Epidemic in Thailand

At the request of the Government of Thailand, 500,000 c.c. of cholera vaccine are being sent to that country by WHO to help combat a cholera epidemic which has already claimed more than 300 lives. More than 2,000 cases have been reported in Bangkok and other parts of the country. This is the first cholera epidemic in Thailand for some years. There are signs that 1958 might be a bad year for cholera. Cases are running at twice last year's rate in East Pakistan (8,900 as against 4,000 in 1957) and India (17,600 as against 8,400), and the disease has also been reported in Cambodia (2 cases) and Burma (4 cases).

International Requirements for Polio Vaccine

A set of international requirements for the production and control of the Salk-type polio vaccine has been formulated by a WHO study group (chairman Dr. J. H. S. Gear, of Johannesburg). Hitherto difficulties have often been put in the way of free exchange of polio vaccine because of the different requirements in the country of origin and the country wishing to use the vaccine. When finally accepted the new requirements are expected to obviate these difficulties. Other vaccines and therapeutic substances will be the subjects of similar recommendations by other WHO study groups during the coming months.

1. Wld. Hlth. Org. (1958): Epid. Vit. Stat. Rep., vol. II, No. 3.

THE MEDICAL ASSOCIATION OF SOUTH AFRICA

BALANCE SHEET 31ST DECEMBER, 1957

1956 £		£ s. d.	£ s. d.
	Accumulated Funds		
33,724	Balance, 31st December, 1956 ..	31,043 7 7	
2,938	Less: Excess of Expenditure over Income for the Year	8,889 19 11	
30,786		22,153 7 8	
257	Add: Transfer of National Health Services Emergency Fund ..	—	
31,043			22,153 7 8
	Dr. H. A. Moffat Memorial Fund—Capital Account		
252	Balance, 31st December, 1956 ..	287 2 2	
35	Income Received	3 0 7	
		290 2 9	
—	Transferred to University of Cape Town	290 2 9	
			—
	Liabilities		
10,117	Sundry Creditors		11,668 8 4
£41,447			£33,821 16 0

1956 £		£ s. d.	£ s. d.
	Fixed Assets		
7,279	Landed Property—"Byrness", Newlands Avenue, Newlands, Cape—at Cost		7,278 18 9
3,928	Office Furniture, Fixtures and Machines		4,225 0 0
3,195	Net Book Value 1st January, 1953 ..	3,195 0 0	
2,206	Purchased since that date (At Cost) less Sales (At Book Value) ..	2,972 10 4	
5,401		6,167 10 4	
1,473	Depreciation since 1st January, 1953	1,942 10 4	
	Investments		
18,905	*Sundry Investments—At Cost* ..		12,920 0 0
4,335	Quoted Union Government Stock (Market Value, 31st December 1957 £1,146—1956 £4,145) ..	1,350 0 0	
12,820	Unquoted Shares	9,820 0 0	
1,750	First Mortgage Bond	1,750 0 0	
	Current Assets		
7,274	Sundry Debtors less Provision for Doubtful Debts (£600—1956 £600)		7,653 13 3
3,774	Cash at Bank and on Hand		1,744 4 0
	Dr. H. A. Moffat Memorial Fund		
287	Cash at Bank		—
£41,447			£33,821 16 0

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST DECEMBER, 1957

1956 £		£ s. d.	£ s. d.
21,217	*Printing of Medical Journal*		21,565 17 1
1,087	*Printing of Laboratory and Clinical Medicine*		1,029 9 3
25,584	*Administration and Publication Expenses*		28,359 0 10
18,853	Salaries, Pension Fund, Unemployment Insurance and Pension ..	20,339 1 7	
1,525	Rent	2,946 0 0	
1,721	Sundry Expenses	1,866 1 4	
1,075	Postages and Telegrams	1,076 12 8	
766	Printing, Stationery and Office Requisites	677 5 4	
703	Wrappers	460 0 0	
436	Depreciation of Office Furniture, Fixtures and Machines	408 13 4	
305	Telephones	385 6 7	
200	Audit Fees	200 0 0	
4,411	*General Expenses*		5,027 11 2
	Travelling Expenses	4,501 2 0	
3,014	Delegates 3,432 7 9		
1,045	Staff 1,068 14 3		
275	Entertainment Allowances	275 0 0	
54	Medals	205 18 6	
42	Cost of Booklets .. 482 12 0 Less: Sales .. 438 11 4	44 0 8	
—	Bad Debts	1 10 0	
65	Expenses—"History of Medicine in South Africa"	—	
—	*Expenses—Assistant Secretary's Office, Pretoria*		3,324 14 9
1,389	*Expenses—Public Relations Office, Johannesburg*		—
800	*Grants to Universities for Library Services*		800 0 0
97	*Expenses—"Byrness"*	316 3 2	
250	*Less: Rent Received*	250 0 0	
			66 3 2
500	*Special Grant to Southern Transvaal Branch*		—
£54,835			£60,172 16 3

1956 £		£ s. d.	£ s. d.
33,428	*Income from Medical Journal* ..		31,598 7 9
31,630	Advertising, less Commission ..	29,662 9 11	
1,652	Non-Members' Subscriptions ..	1,823 9 11	
146	Miscellaneous	112 7 11	
657	*Income from Laboratory and Clinical Medicine*		539 8 8
520	Subscriptions	445 0 0	
107	Advertising, less Commission ..	71 8 10	
30	Miscellaneous	22 19 10	
10,975	*Members' Subscriptions*		11,290 12 9
2,482	*Agency Income*		2,382 14 6
4,355	*General Income*		5,471 12 8
3,377	Insurance Commission	4,371 6 3	
667	Interest on Investments	672 4 4	
311	Miscellaneous	413 2 1	
—	Profit on Redemption of Union Government Stock	15 0 0	
2,938	*Excess of Expenditure Over Income transferred to Accumulated Funds* ..		8,889 19 11
	Note: Non-Members' Subscriptions outstanding at 31st December, 1957, amounting to £379 15s. 0d., have been brought into account in the above figure of £1,823 9s. 11d. No provision in respect of outstanding Subscriptions was made at 31st December, 1956.		
£54,835			£60,172 16 3

THE MEDICAL ASSOCIATION OF SOUTH AFRICA

BENEVOLENT FUND

BALANCE SHEET 31ST DECEMBER, 1957

1956 £		£ s. d.	1956 £		£ s. d.	£ s. d.
	Accumulated Funds			*Assets*		
43,712	Balance, 31st December, 1957 ..	44,352 5 8		*Investments at Cost*		
			7,067	*Union Government Stocks (Quoted)* (Market Value 31st December, 1957 £5,116—1956 £6,609)		5,575 0 0
				£2,500 3½% 1962/65 ..	2,450 0 0	
				£1,125 3% 1957/64 ..	1,125 0 0	
				£1,000 3% 1959/69 ..	1,000 0 0	
				£1,000 3% 1960/70 ..	1,000 0 0	
			4,626	*Shares in Building Societies (Unquoted)* Saambou (Permanente) Bouvereniging—6,126 Fully Paid-up Indefinite Shares of £1 each		6,126 0 0
			29,239	*Secured Loan* Medical House (Proprietary) Limited—First Mortgage on Medical House, Wale Street, Cape Town		29,239 0 0
						40,940 0 0
			949	*Sundry Debtors* Interest Accrued		1,097 7 3
			1,831	*Cash on Savings Bank Account and at Bank*		2,314 18 5
£43,712		£44,352 5 8	£43,712			£44,352 5 8

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST DECEMBER, 1957

1956 £		£ s. d.	1956 £		£ s. d.
3,120	*Benevolent Payments*	3,712 6 0	2,149	*Interest on Investments*	2,436 7 0
—	*Printing Copies of Constitution* ..	65 10 3	—	*Profit on Redemption of Union Government Stock*	7 10 0
3	*Stationery and General Expenses* ..	13 16 6	974	*Appropriation from Capital for Additional Benevolence*	1,347 15 9
£3,123		£3,791 12 9	£3,123		£3,791 12 9

ACCUMULATED FUNDS

	Appropriation to Income and Expenditure Account for Additional Benevolence	1,347 15 9	41,984	*Balance, 31st December, 1956* ..		43,712 15 4
974			2,702	*Contributions to Capital for the Year ended 31st December, 1957*		1,987 6 1
43,712	*Balance, 31st December, 1957* ..	44,352 5 8	2,064	Donations	1,200 19 1	
			365	Services Rendered	560 12 6	
			273	Votive Cards	225 14 6	
£44,686		£45,700 1 5	£44,686			£45,700 1 5

REPORT OF THE AUDITORS TO THE MEMBERS OF THE MEDICAL ASSOCIATION OF SOUTH AFRICA

We have examined the books and accounts and vouchers of the Association and have satisfied ourselves of the existence of the securities. We have obtained all the information and explanations which, to the best of our knowledge and belief, were necessary for the purpose of our audit. In our opinion, proper books of account have been kept by the Association, so far as appears from our examination of those books.

The above Balance Sheet and attached Income and Expenditure Account are in agreement with the books of account. In our opinion, and to the best of our information and according to the explanations given to us, the said Accounts give the information required by the Companies Act 1926, as amended, in the manner so required and the Balance Sheet gives a true and fair view of the state of the Association's affairs as at 31st December, 1957, and the Income and Expenditure Account gives a true and fair view of the deficit for the year ended on that date.

Cape Town
10th April, 1958.

Gurney, Notcutt & Fisher.
Chartered Accountants (S.A.)
Auditors.

BENEVOLENT FUND

We have examined the books and accounts and vouchers of the Benevolent Fund and satisfied ourselves of the existence of the securities. The above Balance Sheet and attached Statements of Income and Expenditure and Accumulated Funds are in agreement with the books of account. In our opinion the Balance Sheet gives a true and fair view of the state of the Fund's affairs as at 31st December, 1957, and the Statements of Income and Expenditure and Accumulated Funds give a true and fair view of the Income and Expenditure of the Fund in respect of the year ended that date.

Cape Town
11th April, 1958.

Gurney, Notcutt & Fisher
Chartered Accountants (S.A.)
Auditors.

CLOSED PANEL APPOINTMENTS TO BENEFIT SOCIETIES

The Secretary of the Medical Association of South Africa has received the following letter from the Acting Registrar of the South African Medical and Dental Council dated from Pretoria on 21 July 1958:

I am directed by the President of my Council to invite your attention to a memorandum on Closed Panel Appointments to Benefit Societies in relation to Medical Ethics, which was published in the issue of the *South African Medical Journal* on 10 May 1958[1] and a letter in connection with the matter, under the hand of the Registrar of my Council, which was published in the issue of 12 July 1958.[2] In this latter communication it was stated that 'the memorandum is not a memorandum of the Council but it is one which was submitted to the Council and which is being considered by a special *ad hoc* Committee. It does not necessarily express the views of the Council'.

My President desires me to say that, whereas the statement is factually correct, representations have been made to him that it might have led to misapprehension in the minds of the profession.

The facts are that the South African Medical and Dental Council, at its meeting in September 1957 appointed an *ad hoc* Committee to investigate and report on the question of closed-panel appointments of Medical and/or dental practitioners to benefit societies in relation to medical ethics. At its first meeting, in February 1958, the memorandum in question was edited and accepted by the special *ad hoc* Committee as representing its views anent the ethical implications which might be involved in the matter. The *ad hoc* Committee further directed that the comments of the Medical and Dental Associations on the memorandum be invited. Any representations which the Associations may care to make will be considered by the *ad hoc* Committee prior to reporting on the matter to my Council.

My President is of the view that, inasmuch as an erroneous impression might have been created by previous publications in the *South African Medical Journal* in connection with this matter, the facts should be brought to the attention of the profession, in order that no dubiety may exist, and has directed me to request you accordingly.

1. Memorandum (1958): S. Afr. Med. J., 32, 504.
2. Impey, W. M. (1958): *Ibid.*, 32, 716

A COLLEGE OF GENERAL PRACTITIONERS

The General Practitioners' Group, Cape Western Branch, submit the following for publication:

Our specialist colleagues have by their own endeavour and initiative built up well organized groups coordinated and controlled by an effective College of their own. General practitioners are slowly realizing that there is a real danger of the general practitioners' becoming academically isolated through lack of interest or inability due to economic necessity to use what facilities are available in the teaching hospitals. General practitioners have carried on in a haphazard way without headquarters, with no influence over undergraduate training and not much control over postgraduate education, and without the status of their specialist colleagues, which has been further enhanced by their own College.

There is no existing college or academic body to represent primarily the interests of the general practitioner. If our specialist colleagues, who are numbered by hundreds, find the necessity for an individual College, then on numbers alone the general practitioners, of whom there are many thousands in South Africa, should find the initiative and means to establish an equivalent College of General Practitioners. Such a College would be of invaluable assistance to general practitioners in many ways, giving academic leadership stimulation for further postgraduate education and thereby improving the professional ability of the general practitioner and his status in the eyes of his specialist colleagues, the medical students and the public as a whole.

Colleges of General Practitioners have been formed in Britain and in America. Dr. Ian Grant, of Glasgow, is the President of the British College and we have pleasure in announcing his forthcoming visit to South Africa at the invitation of the National General Practitioners' Group. He will visit all the main centres of South Africa during September 1958.

We are anxious to collect information, assistance and constructive criticism of this subject of a possible College of General Practitioners. If any of your readers have suggestions or comments to make in favour of or against this proposal, will they please communicate with us in writing either in Afrikaans or English (P.O. Box 643, Cape Town).

PASSING EVENTS : IN DIE VERBYGAAN

University of Natal. The following candidates have completed the requirements for the degrees of M.B., Ch.B. of the University of Natal: Marivate, C. D., Mbambo, M. S. (Miss).

* * *

Dr. Mark Horwitz of Cape Town will be away on a visit to England from 1 August to 30 October 1958. He will devote some of his time to postgraduate study in the fields of rheumatology and steroid therapy.

* * *

Dr. Botha de Meillon, of the South African Institute for Medical Research, has received a grant from the Rockefeller Foundation to enable him to attend the VIth International Congresses on Tropical Medicine and Malaria which will be held in Lisbon in September 1958.

* * *

Dr. B. Bronte-Stewart, who has recently returned from abroad, will give an informal talk entitled 'Research Abroad, with reference to Ischaemic Heart Disease', in the large lecture theatre on A Floor, Groote Schuur Hospital, Cape Town, on Tuesday 5 August at 12 noon. All interested are invited to attend.

* * *

Red Cross War Memorial Children's Hospital, Rondebosch, Cape. The next meeting in the Postgraduate Seminar Series of lectures under the auspices of the University of Cape Town Department of Child Health will be held in the lecture theatre of this Hospital on Wednesday 6 August at 5 p.m. Dr. A. B. Bull will speak on 'The Management of Respiratory Emergencies'. All medical practitioners are welcome.

* * *

Twelve orthopaedic surgeons from South Africa attended the Joint Orthopaedic Meeting of the English-speaking world, held in Washington from 10 to 17 May of this year. They were: Messrs. C. E. Allen, G. Dommisse, J. M. Gold, G. T. du Toit, C. Moller, S. Sacks, A. Singer, J. T. Commerell, R. Trevor-Jones, H. Reitz, M. Luntz, A. J. Helfet.

As President of the South African Orthopaedic Association, Mr. Helfet presided over part of the Meeting.

* * *

A Section of Psychopharmacology, as a part of the Fourth International Congress of Psychotherapy, will meet in Barcelona from 1-7 September 1958. This Section of Psychopharmacology will be devoted to the practical, scientific, non-speculative aspects of the growing body of knowledge of the biochemistry, pharmacology and therapy of normal and abnormal mental activity. The official languages for the Congress are: English, French, German and Spanish. All Psychiatrists are cordially invited to join in the Congress. Further information can be obtained from Prof. F. G. Valdecasas, Faculty of Medicine, University of Barcelona.

* * *

New SANTA Centre, Kimberley. On 21 July His Worship the Mayor of Kimberley, Councillor R. V. de Villiers, presided at

the official opening of this centre, which is named the H. M. Wolfsohn SANTA Centre in honour of the Medical Officer of Health of Kimberley. Also present were Mr. Ian G. Fleming, National Chairman of the South African National Tuberculosis Association (SANTA), Dr. M. J. Broderick, National Secretary, and Mr. Hymie Miller, M.P., member of the management committee. This is the 20th SANTA centre to be officially opened; 2 others are admitting patients and will be officially opened shortly and yet another 4 centres will be completed within the next few months.

* * *

Paediatric Prize Essay 1959. The South African Paediatric Association is again offering its annual prize to 5th- and 6th-year medical students. The subject of the essay is 'The Aetiology of Gastro-Enteritis in Infants' and full details are set out in a letter from Dr. E. Fasser, Honorary Secretary/Treasurer of the S.A. Paediatric Association which will be found in our correspondence columns on page 796 of this issue.

Prysopstel vir Kindergeneeskunde 1959. Die Suid-Afrikaanse Vereniging vir Kindergeneeskunde bied weer sy jaarlikse prys aan vir 5de en 6de jaar mediese studente. Die onderwerp van die opstel is ‚Die Etiologie van Ingewandsontsteking by Suigelinge'. Verdere besonderhede word uiteengesit in 'n brief van dr. E. Fasser, Ere-sekretaris, S.A. Vereniging vir Kindergeneeskunde. Die brief word op bladsy 796 van hierdie uitgawe geplaas.

* * *

Atoms for Peace Exhibition. The Nuclear Energy Trade Associations' Conference of Great Britain (NETAC) announce that 79 British firms are to be represented at the Second International Exhibition of the Peaceful Uses of Atomic Energy, which is to be held in Geneva, Switzerland, on 1-14 September 1958. In addition to the industrial application of nuclear energy, which will constitute the bulk of the exhibition, there will be exhibits of medical interest, including the demonstration of a wide variety of uses for radio-isotopes and models of electron linear accelerators to illustrate irradiation experiments. Britain is not only a major world supplier of radio-isotopes, but is offering special equipment for the production of radio-isotopes, which will constitute one of the exhibits likely to attract considerable attention, as will also one dealing with the manufacture of stable isotopes of boron, carbon, nitrogen and oxygen.

* * *

The National General Practitioners Group, Cape Western Sub-Group. A clinical evening will be held in the E-Floor Lecture Theatre, Groote Schuur Hospital, Cape Town, on Wednesday 13 August at 8.15 p.m. This will take the form of a discussion on 'Clinical Difficulties Encountered in General Practice'. Prof. F. Forman will preside and answer questions. All medical practitioners are cordially invited whether members of the Group or not.

Die Nasionale Algemene Praktisyns-groep, Wes-Kaaplandse sub-groep. 'n Kliniese byeenkoms sal in die E-vloer Lesingsaal, Groote Schuur-hospitaal, Kaapstad, gehou word op 13 Augustus om 8.15 nm. Die byeenkoms sal die vorm aanneem van 'n bespreking oor, ‚Kliniese Moeilikhede wat in die Algemene Praktyk Voorkom'. Prof. F. Forman sal as voorsitter optree en vrae beantwoord. Alle praktisyns word vriendelik uitgenooi, of hulle lede van die Groep is of nie.

* * *

Paediatric Congress. The Fourth Congress of the South African Paediatric Association will be held at the Pretoria Hospital (Administrative Block) on 9-11 October 1958. A number of papers in the programme hold interest for practitioners not engaged in the practice of paediatrics. General practitioners in particular will find much material of value, and it is hoped that as many as are interested will take part in the Congress. A cordial invitation is extended to all practitioners, both general and specialist, to attend the meetings and join in the discussions. All but a few of the papers will be of 20 minutes duration to be followed by discussion. All members of the Paediatric Association are invited to contribute papers, the titles of which should reach the Hon. Secretary before 15 August. Provision has been made for social functions at night, including a cocktail party and the annual dinner, to which wives and partners are cordially invited. During the day a Ladies' Entertainment Committee will provide transport and entertainment facilities for wives. A more detailed programme will be published later. Queries of any kind regarding accommodation, sport, etc., should be addressed to the Hon. Secretary, Dr. E. Fasser, 201 Medical Centre, Pretoria (telephone 3-7953).

Income Tax. At this season, when taxpayers are called upon to submit their income-tax returns, medical practitioners are reminded of publications on the subject that have appeared in the *Journal:*

1. On 1 September 1951 an article by J. Lavine, B.Com., A.C.W.A. appeared under the title 'The Doctor's Income Tax Guide' (S. Afr. Med. J., **25**, 624), which is reprinted as a 48-page booklet obtainable at the Association's Office, P.O. Box 643, Cape Town, price 2s. 6d.
2. On 27 October 1956 a letter was published from the Commissioner of Inland Revenue on the subject of income-tax deduction for entertainment expenditure (*Ibid.*, **30**, 1044).
3. On 27 July 1957 an article by David Shrand, M.Com., A.S.A.A., C.A. (S.A.), was published, entitled 'Income Tax as it affects the Medical Practitioner' (*Ibid.*, **31**, 755).
4. The subject of deduction for postgradiate study courses was fully dealt with in a letter from the Commissioner for Inland Revenue published in the *Journal* of 11 January 1958, together with an editorial (*Ibid.*, **32**, 50, 31).

* * *

M. R. Drennan Fund. On 25 April a presentation of almost £500 was made to Prof. M. R. Drennan, Emeritus Professor of anatomy of the University of Cape Town, by his past students and colleagues. Typical of his generosity and of his deep consideration for medical students he handed this amount to the University to be used in some suitable form towards the welfare of medical students. A small committee was subsequently set up by the Principal, and the *M. R. Drennan Fund* has been established. Its major objective is to utilize the interest on the capital (1) to provide grants to needy and promising second-year medical students, and (2) to provide *ad hoc* grants to distinguished visiting scientists who will be invited to deliver the 'Drennan Lectures' at the medical school.

If an adequate capital sum is realized, consideration will be given to the designing and constructing of stained glass windows in the anatomy department so as to link Professor Drennan's name permanently with the department which he has built up during the past 40 years.

In order to provide the above facilities to their maximum, it has been decided to increase the capital of the Fund. Many past students have indicated that they had not received notification of the previous appeals. Will all those who are interested in the fund kindly communicate with the Secretary, M. K. Drennan Fund, Department of Anatomy, Medical School, Observatory, Cape.

* * *

Die Unie van Suid-Afrika. Departement van Gesondheid. Opgawes van epidemiese siektes en poliomiëlitis in die Unie gedurende die tydperk 11-17 Julie 1958.

Pes en *pokkies.* Geen.

Tifuskoors. Drie nuwe naturellegevalle in bo-Tellelokasie, Herschel.

Poliomiëlitis

	Bl.	*Nat.*	*Kl.*	*As.*	*Totaal*
Transvaal	–	2	–	–	2
Kaapprovinsie ..	1	1	1	–	3
Oranje-Vrystaat ..	1	–	–	–	1
Natal	–	–	–	–	–
Totaal ..	2	3	1	–	6

Plaaslike Outoriteite		*Bl.*	*nie-Bl.*
Transvaal:			
Benoni-distrik	P		1
Lichtenburg-distrik	P		1
Kaapprovinsie:			
Aberdeen-Afdelingsraad	P		1
Port Elizabeth-Munisipaliteit ..	S	1	1
Oranje-Vrystaat:			
Bloemfontein-Munisipaliteit ..	S	1	

Korreksies

Transvaal: Die een geval in die Johannesburgse Munisipaliteit vermeld in die Bylae tot Nuusbrief No. 28 van 1958 as Blanke, moes in die ‚nie-Blanke' kolom verskyn het.

Natal: Een geval in die Durban-Munisipaliteit vermeld in die Bylae tot Bulletin No. 28 van 1958 is nou as nie-Poliomiëlitis gediagnoseer.

P = Platteland S = Stad

NEW PREPARATIONS AND APPLIANCES : NUWE PREPARATE EN TOESTELLE

An X-ray intensifying screen impervious to chemical stains has been announced by the Du Pont Photo Products Department, Wilmington, Delaware, USA, who supply the following information:

The new screen which is the first stainless screen of the kind, and is called the Du Pont Stainless Par Speed X-ray intensifying screen, is the result of long and intensive research to improve further the widely used 'Paterson' intensifying screen and, because it is impervious to processing solutions, developer and fixer stains and can easily be removed from the luminescent surface. On conventional screens such stains often produce confusing shadow artifacts which appear on exposed radiographs, decreasing or destroying their effective diagnostic quality.

An added feature of the Stainless Par Speed Screen is the polyester base support which replaces the conventional cardboard. This new material is a product of the Du Pont research programme, which developed the 'Mylar' polyester film, the 'Dacron' polyester fibre, and the 'Cronar' polyester film base. The strength flexibility and durability which this base gives the new screen make it resistant to damage when the screen is mounted or removed from the cassette holder. Its moisture resistance prevents distortion and warping of the screen under virtually all atmospheric conditions.

* * *

CELONTIN, A NEW ANTICONVULSANT

Supplementing their established anticonvulsants, Epanutin and Milontin, Parke, Davis Laboratories (Pty.) Ltd. have introduced Celontin, a new anticonvulsant to assist in providing adequate coverage of many of the varied manifestations of epilepsy. They supply the following information:

Celontin is a heterocyclic anticonvulsant compound first synthesized in the laboratories of Parke, Davis and Company. The chemical description is: N-methyl-a, a-methylphenylsuccinimide. The broad spectrum of anticonvulsant activity observed with Celontin suggests a wide range of clinical applicability.

Celontin is specially indicated for the treatment of psychomotor epilepsy, the form of epilepsy often refractory to treatment with other anticonvulsants. Celontin has also frequently been found to be of value in patients suffering from petit mal, whose attacks were not controlled by other drugs. When a patient has combined grand mal and petit mal, control of the petit mal component in some patients may tend to aggravate the grand mal. However, no increase in incidence or severity of grand-mal attacks has been found to accompany Celontin therapy.[1]

In a published report on studies with 54 patients, a high proportion of whom had intractable petit-mal seizures, Celontin exhibited good anticonvulsant activity.[2] In similar studies with 72 patients, it was concluded on the basis of a high standard of seizure reduction that Celontin is a drug of choice for petit mal.[3] The average dosage for these groups was 0·9 to 1·2 g. (3-4 Kapseals) per day.

In another group consisting of 15 patients with psychomotor epilepsy,[3] Celontin was seen to confer measurable protection against seizures. Celontin therapy was accompanied by complete control in 3 patients, practical control (80-99% seizure reduction) in 3, and partial control (5-79% seizure reduction) in 6, thus providing improvement in 12 of the 15 patients.

Dosage and Administration. The suggested initial dosage schedule is 1 Kapseal (0·3 g.) per day for the first week. If required, the dosage may be increased thereafter, at weekly intervals, by 1 Kapseal per day per week, for the 3 weeks following, to a maximum daily dose of 4 Kapseals (1·2 g.). As the therapeutic effect may vary amongst patients, therapy with Celontin should be individualized according to the needs of each patient.

Side-effects which have occasionally been reported to accompany Celontin therapy include drowsiness, dizziness, ataxia, nervousness, vomiting. The commonest side-effects reported are ataxia and drowsiness. These side-effects can usually be controlled by reducing the dosage.

Package. Celontin is available in Kapseals (0·3 g.) in bottles of 50.

REFERENCES

1. Cordoba, E. and Strobos, R. (Bowman-Gray School of Medicine): to be published.
2. Zimmerman, F. and Burgemeister, B. (1954): Arch. Neurol. Psychiat., 72, 720.
3. *Idem* (1955): J. Amer. Med. Assoc., 157, 1194.

REVIEWS OF BOOKS : BOEKRESENSIES

LYMPHOCYTE EXCHANGE

Die Physiologie des Lymphozytenwechsels und seine Beeinfluhbarkeit durch Hormone des Hypophysen-Adrenal-systems. Von Priv. Doz. Dr. H. G. Hansen. 1958. VIII, 164 Seiten, 74 teils mehrfarbige Abbildungen, Gr.-8°, kartoniert DM 18.50. Stuttgart: Georg Thieme Verlag.

Inhaltsverzeichnis: Geleitwort. Einleitung. I. Untersuchungen zur Physiologie des lymphatischen Systems. II. Die Anwendung von Indikatorverfahren für Untersuchungen. III. Einflüsse des adrenocorticotropten Hormoas der Hypophyse un der Glukocorticoide auf den Lymphozytenwechsel. IV. Übersicht der Ergebnisse. V. Zusammenfassung. Literaturverzeichnis.

The term 'Lymphozytenwechsel' means the formation of lymphocytes and their life-cycle. The author tries to get new results in draining the thoracic duct of the cat by marking the lymphocytes with P_{32} and with fluorescent dyes.

He mentions the action of ACTH and Cortisone in cases of leukaemia and gives a good review of the literature and confirms the well-known facts that the glucocorticoids inhibit the synthesis of proteins and depress the formation of lymphocytes.

H.W.

EFFECT OF RADIATION ON HUMAN HEREDITY

Effect of Radiation on Human Heredity. Report of a Study Group convened by WHO together with Papers presented by Various Members of the Group. Pp. 168. Figures. £1. Geneva. World Health Organisation. 1957.

Contents: Part I. Report of Study Group. Report of Study Group on the Effect of Radiation on Human Heredity. 1. Introduction. 2. Natural and man-made sources of ionizing radiation. 3. Importance of recording radiation exposure in individuals and populations. 4. Research. 5. Some conclusions. Annex. List of participants. *Part II. Papers presented at Study Group.* Damage from point mutations in relation to radiation dose and biological conditions—*H. J. Muller.* Types of mutation at known gene loci and possibility of hitherto unrecognized mutations being induced. Irradiation of animal populations: results and work needed—*T. C. Carter.* Some of the problems accompanying an increase of mutation rates in Mendelian populations—*Bruce Wallace.* Exposure of man to ionizing radiations, with special reference to possible genetic hazards—*R. M. Sievert.* Detection of induced mutations in offspring of irradiated parents—*J. Lejeune.* Gonad doses from diagnostic and therapeutic radiology—*W. M. Court Brown.* Mutation in man—*L. S. Penrose.* Possible areas with sufficiently different background-radiation levels to permit detection of differences in mutation rates of 'marker' genes—*A. R. Gopal-Avengar.* Comparisons of mutation rates at single loci in man—*A. C. Stevenson.* Some problems in the estimation of spontaneous mutation rates in animals and man—*James V. Neel.* Effect of inbreeding levels of populations on incidence of hereditary traits due to induced recessive mutations—*N. Freire-Maia.* Detection of genetic trends in public health—*Harold B. Newcombe.*

It might be wondered why it was necessary to produce yet another study on the effects of radiation on man, so soon after the publication of two important British and American studies, namely *The hazards to man of nuclear and allied radiations*, published by the Medical Research Council of Great Britain (1956) and *The biological effects of atomic radiation*, published by the U.S. National Science Foundation (1956). Both studies, though differing characteristically in emphasis and tone, had started out by assuming that the effect of increased radiation in man is to increase the mutation rate. Thereafter, both had conceived it as their primary problem to assess the hazard, for future generations, of such increased mutation rates. They had chosen an arbitrary standard, the *doubling dose*, that is, how much extra radiation, over and above the present background radiation, is necessary to double the mutation rate of any gene.

The justification for the present work lies in its fulfilment of its stated purposes, viz. to obtain opinions from other countries than the U.S.A. and Britain, and to concentrate upon the gaps in present knowledge and thus suggest what lines of research should be followed to increase understanding of the genetic effects of

ionizing radiations on man. Accordingly, in August 1956, the World Health Organisation brought together at the University of Copenhagen experts from Brazil, Canada, Denmark, France, Germany, India, Italy and Sweden, as well as the United States and the United Kingdom. Their deliberations have resulted in the present book.

It must be stated at once that by emphasizing the many unsolved problems, the Study Group have brought a sobering element of balance into a problem which the earlier publications had reflected in a somewhat lopsided fashion. Anyone familiar with recent trends in genetical thought would have realised long since that the very basis on which the estimated 'doubling dose' was calculated was most tenuous; further, the stress laid on the population effects of an increased mutation rate tended to ignore the modern concept of *balanced polymorphism*, whereby a mutant gene is maintained in a population for a favourable heterozygous effect, despite an adverse homozygous effect. A human example of this phenomenon may well be the possible anti-malarial effect of the sickle-cell gene in single dose, as contrasted with the pathological effects of the homozygous gene in producing sickle-cell anaemia. The mechanism of such balanced polymorphism is not readily upset by an increase in mutation rate, as Wallace and Neel are at pains to indicate.

It is impossible here to review in detail the many valuable contributions to this symposium, the wide scope of which is suggested by the chapter headings listed above. It should be mentioned, however, that two general steps are recommended towards minimizing the dangers to descendants—*reduce exposure*, and *seek more knowledge about the effects of exposure*. In the latter regard, the Study Group lists thirteen major gaps in present knowledge, under the headings of radiation research and human genetical research, ranging from the mode of gene action and the mapping of human chromosomes to twin studies and patterns of mating in man. James V. Neel of the University of Michigan makes this appeal:

> 'When considering the genetic impact of increased exposure to ionizing radiation, we should prefer not to attempt to extrapolate from other species to man, but rather to base our thinking entirely on human data. Unfortunately, as has already become abundantly clear, the necessary data on man are not yet to hand, nor is it likely that they will be for some time to come.'

Finally—and we in South Africa, who were not represented at the Copenhagen Conference, might do well to ponder this—the Group concluded that there are too few institutions or large university departments devoted to general genetics and even fewer to human genetics. 'Medical undergraduates should all receive training in genetics.' The reviewer feels strongly that the time is long overdue for the establishment at South African medical schools and teaching hospitals of heredity clinics and counsellors and of systematic courses in human and clinical genetics. Perhaps the increasing radiation hazard may have as one constructive side-effect a new interest on the part of the medical profession in the problems handled with such admirable objectiveness in this valuable W.H.O. publication.

P.V.T.

CORRESPONDENCE : BRIEWERUBRIEK

AFRIKAANS AS MEDIESE VAKTAAL

Aan die Redakteur: Dit is met groot genoeë dat ek merk dat u die onderwerp van Afrikaans as mediese vaktaal aanroer. Ek dink ons het nou ver genoeg gevorder om te probeer om tot eenstemmigheid te kom.

As dit vir my as Afrikaanssprekende, met 'n Afrikaanse opleiding, nodig word om die Engelse gedeelte van u redaksionele artikels te moet lees om te weet waaroor die onderwerp handel, dan moet daar iets radikaals verkeerd wees met ons vertalings.

Ek persoonlik dink dit is omdat die taalkundiges 'n te groot aandeel, en die medici 'n te klein aandeel in die vertalings het, dat sulke gedrogte soos ‚borskwaaldokter' ontstaan. Voor lank sal ons 'n stadium bereik waar ons Engelssprekende kollega of ons kollega vanaf die kontinent nie die vaagste benul sal hê waar van ons praat nie.

Daar moet tog seker 'n skeidslyn wees tussen die terme soos gebruik deur die medici en die gebruik deur die leke-publiek. Die Engelssprekende leek sal die woord ‚windpipe' gebruik, maar ek is seker sy dokter sal by voorkeur die woord ‚trachea' gebruik.

Ek wil voorstaan dat ons in kontak moet bly met die terme soos gebruik in die Duitse en Hollandse taal met wie ons tog 'n noue verband het.

J. A. Engelbrecht

Hospitaal King Edward VIII
Umbiloweg
Durban
15 Julie 1958

AFRIKAANS AS MEDIESE VAKTAAL

Aan die Redakteur: Graag wil ek u bedank vir u inleidingsartikel ‚Afrikaans as Mediese Vaktaal' in 'n onlangse uitgawe van u blad.[1] U het die saak baie mooi aangeroer en myns insiens ook die regte voorstel vir die huidige stadium gemaak, naamlik dat daar 'n raadplegende kommissie in die lewe geroep moet word.

Die voorbeeld wat u aanhaal in verband met die spelwyse van cervix, of dan serviks, is baie pertinent, veral toevallig wat my eie vak betref. Ek het altyd die woord op die eerste manier gespel en was heeltemal tevrede daarmee. Op 'n goeie dag is ons egter ingelig dat dit nie die regte Afrikaanse spelwyse vir die woord was nie, maar dat die tweede spelvorm die regte sou wees. Die tweede vorm was vir my nie juis aanneemlik nie, en met veel gemoedswroeging het ek my versit teen die aanname van hierdie vorm. Ek het so ver gegaan as om 'n hoogstaande persoon in die Vaktaalburo te besoek en die saak met hom te probeer uitredeneer. Hy was egter nie vatbaar vir enige van my leke-besware nie, met die gevolg dat ek die stryd gewonne gegee het en die woord ‚serviks' gespel het. Groot, egter, was my verwarring toe my meerderes met 'n doodtevrede handgebaar hulle nog ten gunste van die spelwyse ‚cervix' verklaar het en tot vandag toe nog die woord op hierdie wyse spel.

Soos u in u inleidingsartikel sê, is dit nie 'n saak van twis oor hoe die woord gespel moet word nie, maar dat daar deur onderlinge raadpleging vasgestel moet word wat die redelikste rigting is om onder die omstandighede in te slaan en dat, veral hulle wat met die skryf van die taal te doen het, naamlik in u blad en aan die Afrikaanse universiteite, hulle moet neerlê by die besluit van hierdie kommissie en hulle raad volg. Dit sou van geen waarde wees as daar met so 'n kommissie geraadpleeg word, maar hulle raad tog nie gevolg word nie.

Ek vertrou dat uit u goeie voorstel daar binnekort iets tot stand gebring sal word wat vir dié van ons wat Afrikaans as mediese vaktaal gebruik, bestendige leiding sal gee.

P. M. Bremer

Transvaliagebou 421
Sentraalstraat
Pretoria
16 Julie 1958

1. Van die Redaksie (1958): S. Afr. T. Geneesk., 32, 675.

AFRIKAANS AS MEDIESE VAKTAAL

Aan die Redakteur: Dit is 'n saak van besondere belang wat onlangs aangeroer is in die inleidingsartikel onder die opskrif ‚Afrikaans as Mediese Vaktaal'.[1]

Die skepping van Afrikaans as mediese vaktaal het betreklik onlangs begin en tog is daar al 'n dringende behoefte aan eenvormigheid. U het gewys op die verskillende gebruiksrigtings wat daargestel is deur die pionierwerkers op hierdie terrein. Hulle skof was swaar en taai en ons is die bult nog nie uit nie. Dit word maar te goed besef deur elkeen wat reeds 'n Afrikaanse bydrae vir ons blad probeer lewer het.

My beskeie mening was nog steeds dat die internasionale terminologie gevolg moet word, waar Afrikaans as mediese vaktaal op 'n akademiese vlak gebesig word. So sou ek die woord *cervix* verkies bo *serviks* of *baarmoedernek*.

Maar dit is 'n perd van 'n ander kleur wanneer die dokter met sy Afrikaanssprekende pasiënte gesels. Daar moet jou taal vir die pasiënt só verstaanbaar wees dat hy sy siekte weer vir die familie en buurmense kan gaan uitlê. Soms gebeur dit ook dat 'n pasiënt na 'n spesialis verwys word en dan kom oom Jan terug en half-ongeduldig word die brief aan jou oorhandig, met die woorde: ‚Dokter, lees bietjie hier en vertel my in plat Boere-Afrikaans wat met my verkeerd is!'

In die mediese opleiding is suiwer taalgebruik noodsaaklik,

maar die toekomstige dokter moet ook geleer word om die taal te kan praat van sy pasiënt hetsy Afrikaans, Engels of Bantoe. En vir hierdie taal het die volksmond beskrywende terme geskep wat sekerlik nie in ons leerboeke gevind word nie. Dink maar aan Pink se siekte wat beskryf word as ‚die-vier-maande-skree'.

Die taalprobleem het ook nog ander fasette. Gesondheidsvoorligting bestaan daaruit dat siektes soos tering en bilharzia deur 'n semi-tegniese medium oorgedra word aan die massa. Woorde soos *bilharzia*, *cercaria* en *miracidium* kan moeilik deur Afrikaanse terme vervang word. Verafrikaansing van gemelde woorde sal dan ook nie veel sin hê nie. Maar aan die anderkant, *ingewandsbilharzia* klink beter as *intestinale bilharzia* en *urienêre bilharzia* is weer waarskynlik klinies meer juis as *blaasbilharzia*. So is die taak vir eenvormigheid nie sonder probleme nie.

Sekere terme in ons mediese vaktaal leen hulle ook feitlik nie tot verafrikaansing nie—net soos wat die gevierde Totius tydens die bybelvertaling verklaar het dat ‚Job nie Afrikaans wil praat nie'.

Daarom wil ek die voorstel ondersteun dat 'n sterk raadgewende taalraad in die lewe moet geroep word om rigting te gee aan die ontwikkeling van Afrikaans as mediese vaktaal.

‚Rigtingloos'

1. Van die Redaksie (1958): S. Afr. T. Geneesk., 32, 675.

SOUTH AFRICAN PAEDIATRIC ASSOCIATION: PAEDIATRIC PRIZE ESSAY, 1959

To the Editor: I should like to inform you that the South African Paediatric Association is again offering its annual prize to 5th- and 6th-year medical students. The details are as follows:

The subject of the Essay is 'The Aetiology of Gastro-enteritis in Infants'. Entry is open to all 5th- and 6th-year medical students in South Africa. The Essay must be limited to 5,000 words, may be in English or Afrikaans, and must be typed in double spacing together with a copy. Entries should be sent to the Secretary, 201 Medical Centre, Pretoria, before the closing date, 31 March 1959.

The prize is a Bronze Medal and a cash prize of £10 for the purchase of books, instruments or subscriptions to journals. The Association reserves the right, if in any year there is in the opinion of the examiners no candidate of sufficient merit, to make no award for that year.

Ellis Fasser

201 Medical Centre
319 Pretorius Street
Pretoria
18 July 1958

Hon. Secretary/Treasurer,
South African Paediatric Association

THE TREASURER'S APPEAL

To the Editor: All members of the Association received a circular, dated May 1958, from Dr. J. D. Joubert, the Honorary Treasurer. Certain information contained therein is, to say the least of it, rather startling. Before we start asking for more money from the members don't you think that expenditure should require very careful scrutiny and possible pruning?

The items that strike me forcibly are:

Salaries £22,000 *per annum* (*nearly* £2,000 *per month*). Where does all this money go? Doctors are notoriously bad business men but this seems out of all proportion. To whom is it paid? We require a bilingual Editor, a Business-manager-Secretary and certain office staff.

Rents for Offices, Cape Town, Johannesburg and Pretoria. Why are all these offices necessary? Is it not possible to do *all* the Association business from a central office—say Bloemfontein. It can be reached by telephone at any time and 99% of the business can be done by letter—the soundest method of all as letters are filed and require an answer.

Printing Costs. Is it necessary to print the *Journal* so often? For all the reading matter it contains once a month is ample. A large number of the profession look to see who is dead and what jobs are offering and don't read the rest. If there is nothing surgical of interest the surgeons don't look at it, if nothing gynaecological the gynaecologists discard it, and so through all the specialities. The G.P. is usually too busy.

If it is printed so often for the advertisements the advertisers should pay for it. With the enormous amount of advertising matter with which the profession is bombarded these days (blotting paper duly extracted) it, is surprising that manufacturers patronize the *Journal*. Go to doctors' consulting rooms at any time and you will find unopened journals.

This letter is not written in a spirit of criticism but there is much that appears to me, and I am sure to many others, that requires a detailed explanation. Other views, apart from the official, should be interesting.

T. Wooldridge

P.O. Box 36, Plettenberg Bay, C.P.
11 July 1958

[Readers may well refer to the letter which Dr. J. D. Joubert, the Association's Hon. Treasurer, wrote in reply to another letter of criticism, and which was published in last week's *Journal* (p. 772).—*Editor.*]

INDUCTION OF ANAESTHESIA WITH THIOPENTONE

To the Editor: Dr Beric Jackson's insistence on the *slow* administration of I.V. barbiturates in induction is noted;[1] I favour the rapid administration of the adjudged dose. Slow inductions were noted as associated with a range of unpleasant reactions from laryngeal to bronchiolar spasms and even cardiac arrest. These occurred at what I regard as a narrow plane of 'irritable reflexes' around the second stage. Most marked in vagotonic persons with asthma, ulcer and 'stress' histories, they are increased by hypoxia (cf. the restlessness of cerebral anoxia) and inadequate or fading premedication. The precipitating stimulus may be external (auditory or tactile) or internal. Rapid induction has practically eliminated such effects from my experience.

Two cases illustrate: During a P.V. gynaecological operation under spinal, a healthy woman was given a 'sleep dose' of pentothal slowly into an ankle drip; as the much-diluted solution was taking effect and her eyes were closing a bowl was dropped. My comment on the danger of the circumstances prompted the early discovery of a cardiac arrest. Secondly, a rapid induction was given to a frail woman of 75; she had broncho-pneumonia and a recent extensive posterior infarct; operation was uneventful. Two weeks later a slow induction was associated with cardiac arrest.

R. G. Drummond

Coalbrook South Colliery
P.O. Coalbrook, O.F.S.
22 July 1958

1. Jackson, B. (1958): S. Afr. Med. J., 32, 717 (19 July).

PROFESSIONAL LIABILITY

To the Editor: The Federal Council has directed that the attention of members be drawn to the above subject, to which reference is made in Minute 108[1] of the record of the last meeting of Council. The relevant section of the Minute reads as follows:

'A memorandum was submitted regarding the difficulty which a member had experienced in connection with a case for malpraxis pending against him. The circumstances had arisen two or three years ago while the member was in England. At that time he had been covered by membership of the Medical Defence Union. When the case had been instituted against him, amongst others, he had sought protection from the Union, which had been refused as it was stated that he was no longer "in benefit", having resigned his membership of the Union on his return to South Africa. In the circumstances questions had been put to the Medical Protection Society and the Atlas Assurance Company in order to find out what the position would be in regard to a member covered by either of them. It was reported that the Atlas Assurance Company had advised that members insured by them would be covered in such circumstances. The policy of the Medical Protection Society had apparently been the same as that of the Medical Defence Union, but representations made to the Council of the Society had led to an alteration of this policy so that members of the Society who might find themselves in a similar position would in future be covered'.

It would be as well for members to examine the conditions under which they are covered against professional liability, realizing that the cover provided by the Atlas Assurance Company and the Medical Protection Society has the approval of their Association.

A. H. Tonkin

Medical House
35 Wale Street
Cape Town
21 July 1958

Secretary, Medical Association of South Africa

1. Minutes of Federal Council (1958): S. Afr. Med. J., 32, 738 (19 July).